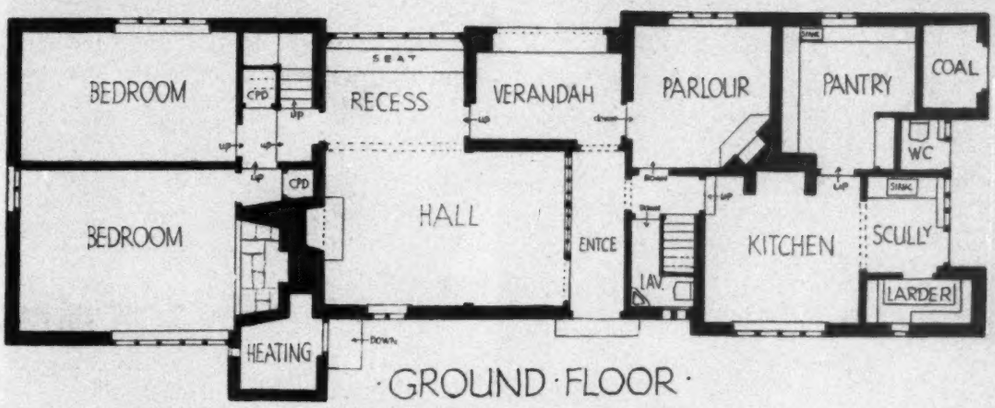
THE BUILDER
A JOURNAL FOR THE ARCHITECT & CONSTRUCTOR

VOL. CXLIV. APRIL 7 1933. No. 4705.

ENTRANCE FRONT.



From "Houses and Gardens."

"Great Meadow," Ottershaw, Surrey.

MESSRS. BAILLIE SCOTT AND BERESFORD, FF.R.I.B.A., Architects.

(*See also page* 570.)

MEETINGS

FRIDAY, *April* 7.

Institution of Sanitary Engineers. Mr. A. Stewart Buckle, M.Inst.C.E., on "Waterproofing of Concrete and Brickwork Structures and Buildings." At 120, Victoria-street, S.W.1. 6 p.m.

Faculty of Architects and Surveyors (London and Home Counties Branch). Mr. A. Wolfe on "Mastic Asphalts used in the Building Industry: Their Properties, Manufacture, Testing, and Causes of Failure under certain circumstances." At the Science Museum, South Kensington. 6 p.m.

SATURDAY, *April* 8.

Incorporated Clerks of Works Association of Great Britain. 50th Annual Dinner. At King's Hall, Holborn Restaurant. Chair to be taken by Sir Raymond Unwin.

MONDAY, *April* 10.

Chartered Surveyors' Institution. Mr. J. McMullen Brooks on "Insurance of Buildings and Assessment of Fire Losses." 8 p.m.

Institution of the Rubber Industry (London and District Section). Mr. R. A. Duncan on "Effect of Modern Materials on Architectural Design." At the First Avenue Hotel, High Holborn, W.C.1. 7.30 p.m.

TUESDAY, *April* 11.

Illuminating Engineering Society. Discussion on "Hospital Lighting," to be opened by Mr. F. Charles Raphael. At Institution of Mechanical Engineers, S.W.1. 7 p.m.

Incorporated Association of Architects and Surveyors (London and Home Counties Branch). Mr. Witton Booth on "Revaluations for Rating." 7 p.m.

WEDNESDAY, *April* 12.

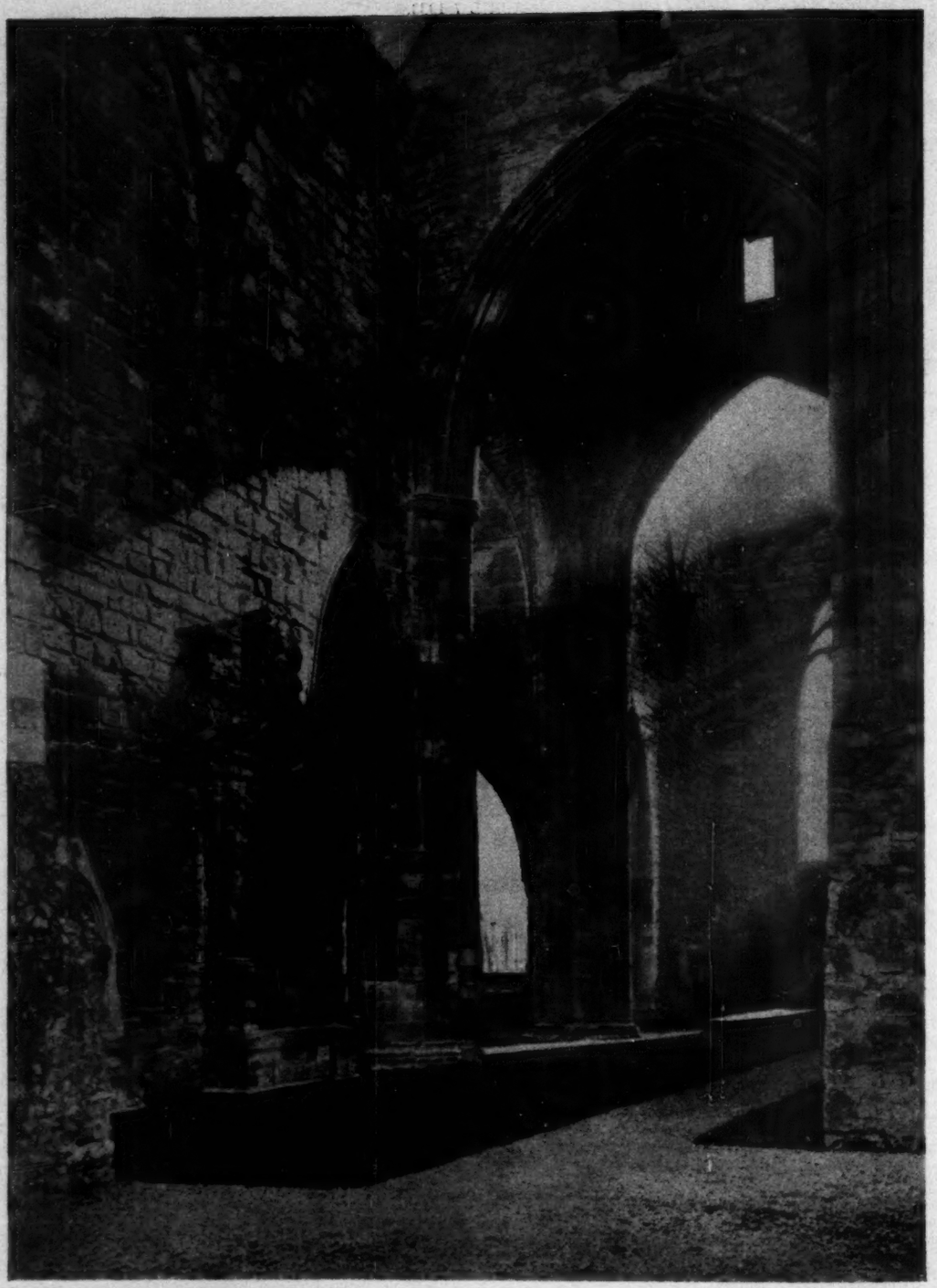
Royal Institute of British Architects. Mr. A. B. Knapp-Fisher on "What London Might Be." 6 p.m.

Illuminating Engineering Society. Mr. D. R. Wilson on "Safety, Health and Welfare of Lighting." At the Home Office Industrial Museum, 97, Horseferry-road, Westminster, S.W.1.

THURSDAY, *April* 13.

Southern Counties Federation of Building Trades Employers. Visit to Broadcasting House. 1.30 p.m.

Institution of Structural Engineers (Yorkshire Branch). Mr. D. T. Lloyd Jones on "The Sixth Order—the Architecture of Concrete." At the Hotel Metropole, Leeds.



From the Ancient Monuments Exhibition at the R.I.B.A.

St. Mary's Church, Haddington, East Lothian : Interior from North Transept, looking South.

PERMANENCE IN BUILDINGS

THERE appears to be a general trend of opinion to regard modern building as temporary—designed to serve conveniently only for a term of years. The opinion is sometimes accepted casually as though such a development were inevitable; and sometimes as a definite statement of policy, aiming directly at a believed fallacy in the old British policy of making all things substantial. Markets which have been lost are said to illustrate instances of England making things too well for others to afford; and the foreign, less substantial, though sufficiently serviceable article, which readily finds its buyer, appears to confirm the argument. As a serious policy, there are in it so many plausible points that we should be wise to study it seriously, both as to what it professes and whither it is likely to lead.

The employment problem is very much bound up with this question, because it is obvious that if a proportion of human tasks are completed in such a thorough manner that they last, relatively speaking, for ever, there will be a diminishing demand as time goes on for those tasks to be repeated. There is a good superficial case for the philosopher who suggests that the wise world will keep its children busy replacing the things that have served their turn with other things better suited to serve yet another short turn. It also seems obvious that the thing that becomes antiquated not because it is worn out, but because it will not completely satisfy a modern need, is as much wasted as though it had fallen to pieces. The slogan: "Good enough for the task, but no better," has, therefore, a superficial appeal, with sufficient sense in it to satisfy the casually minded.

It is only natural that the same philosophy should be applied to building, and it is here that we are most deeply concerned, for it affects not only the quality of our buildings and our method of building, but also the road of approach to architectural expression. The designer who designs to fit a mood must always operate with less caution than he who designs to make a monument. In painting, music, literature and drama there will always be adventurers eager to experiment along new avenues of approach. We can afford to encourage, tolerate or ridicule such adventurers according as we measure their value, for their work can be set aside if it proves wrong, and we can pick and choose from their labours to our liking. In building we have a more responsible task if it is to outlast us. It cannot be set aside if we grow to dislike it, or when its fresh features grow stale. On the contrary, it remains for us and our children unless we treat it as a temporary expedient of the moment. If we do resolve to say that the building of to-day will be inevitably out of date to-morrow, and something new required to meet changing conditions, then indeed our responsibility is lightened, and we may conscientiously experiment with a light heart, within reasonable limits.

That is really the excuse for modernism in architecture, and we cannot profess to feel keenly upon it, if we have accepted the code of impermanence. But before we can do this we have a long way to go and many traditions to outlive, for building in this country has been always an attempt at permanence. It takes a very powerful influence to overcome these ingrained traditions, and unless we are fully convinced that those traditions are actually a handicap to efficient living, we may as well spare the prodigious effort needed to uproot them.

We need hardly say that, with some reasonable reservations, we stand for the highest standards in building, and for an architecture in which the monumental element must lead in its highest expressions, and we give the following as good and sufficient reasons for such a standpoint. First of all, worthy work in itself is an inspiring thing, and we still ask those who are called upon to lay the foundation stone of our buildings, to declare that the stone is "well and truly laid." We can conceive no inspiration in a task which is undertaken in the spirit that the completed work will quickly become useless. First-class quality is still a desirable aim for the builder.

Secondly, we are not satisfied that modern life has disproved the utility of all our old buildings. Our towns are full of such places serving their purposes as well as ever, and lending themselves to such necessary improvements as modern life demands. Thirdly, we believe that the doctrine of "sufficient for the day," as applied to human labour, is a direct incentive to thoughtlessness and imperfections, and that such a philosophy definitely increases the inconveniences which a changing manner of life may tend to bring upon old things. We feel that our efforts should be exercised in the opposite way, to see so far ahead that the things we make now may serve as many generations as possible.

We do not suggest exclusion of experiment in new methods and materials. Things are never so good but that they cannot be improved, and there remains a great field of endeavour for the experimentalist who can find means of removing defects which may now appear inherent in buildings. Neither do we suggest that the factories which were once steam driven, then oil driven, then possibly electrically equipped, and possibly to be driven in the future by some other method, should be built as though they were cathedrals to serve an everlasting ritual. But we do suggest that in the business house, the domestic house, the church and the public building, the greatest effort should be made to anticipate the calls of the future, so that these may serve the purposes of future generations, and remain a monument to the wisdom and foresight of this present. Architects must surely think along these lines when they are in doubt whether or not they are taking themselves too seriously.

Here surely is food for thought also for the student of architecture, to whom the measure of effort required will be the worthiness of the task. The superficial affectation will not be applied to architectural design if the designer has in his mind all the time the responsibilities he owes to the architectural history of the future. Nor does one, when thinking in terms of the monumental, forget the foundation upon which all things which are to last must rest—the traditions of the past. From them we can learn the eternal element which is the life-stream of architecture. If architects will hold fast to principles, it is inevitable that their faithfulness to an ancient ideal will react upon the lesser and more irresponsible arts, which, in turn, must react upon the whole philosophy of life.

NOTES

The Late Sir John Simpson.

The late Sir John Simpson, whose death we record with much regret, ranked with the best of our modern architects. One of his outstanding successes was the Roedean School, finely situated on the sea-front, near Brighton, one of the best of our modern schools for girls. Amongst his best work was the Wembley Exhibition, in partnership with Mr. Maxwell Ayrton, and it is to be wished that the modernistic treatment there shown had been closely followed in much of our modern work. He was a very successful and popular President of the Royal Institute of British Architects between 1919 and 1921, and served on the Council of the British School at Rome, being one of the original members under the Royal Charter. Some notes on his career by Sir Edwin Cooper, A.R.A., appear on p. 573, including a list of his chief architectural and literary works. Those who have read his delightful "Paris Rosemary" will agree with Sir Edwin's regrets that Sir John did not publish more essays in the same strain.

The Royal Gold Medallist.

Sir Charles Peers, who received on Monday last the Royal Gold Medal for services to Architecture, is the distinguished Chief Inspector of Ancient Monuments of H.M. Office of Works. The Royal Gold Medal has primarily been conferred upon him for his services as preserver of our historic buildings. Centuries of neglect in the past allowed the slow and certain decay of many buildings which we now universally recognise as being among the most valuable of our national heritages, worthy of preservation at almost any cost. It is to Sir Charles Peers that this country chiefly owes a debt of gratitude that these buildings are now preserved for all time. Sir Charles is widely recognised as the leading authority on the preservation of ancient monuments and in his official position has directed an enlightened policy which has been the model for much similar work elsewhere. During the twenty years in which he has been Chief Inspector he has accumulated an unrivalled experience, the fruits of which can be seen in every corner of this country, where buildings in the control of the Office of Works have been preserved with a sympathy for their architectural and historical character which reflects Sir Charles's own particular genius and consummate technical ability. Sir Charles, who received his early architectural training in the office of the late Sir Thomas Graham Jackson, has throughout his career been closely linked with architectural, archæological and antiquarian work. He was the Architectural Editor of the Victoria County Histories from 1903 to 1920, and was a member of the Royal Commission on Historic Monuments (England) 1921; for 14 years he was secretary of the Society of Antiquaries, and is now President of the Society, being the first architect to hold that position. He is a Trustee of the British Museum and Honorary Antiquary to the Royal Academy and has recently been appointed seneschal of Canterbury Cathedral. His published works include many papers on architectural and archæological subjects in the proceedings of learned societies.

Advanced Course in Building Science.

The authorities of the Imperial College of Science and Technology are making arrangements for a one-year full-time course of post-graduate type in Building Science to be held at the Imperial College, South Kensington, during the session 1933-34, commencing in October, 1933. The object of this course is to disseminate the knowledge of modern scientific research which has been gathered during recent years at the Building Research Station and elsewhere, and the staff of the Building Research Station will collaborate with the staff of the Imperial College in the conduct of the course, which will comprise lectures and laboratory work in all branches of building science and is intended for suitably qualified persons who are concerned in the scientific aspect of building. The Board of Education are prepared to offer financial assistance in the form of studentships to a limited number of teachers of building science in technical schools and colleges recognised by them. For particulars of this assistance applications should be made to the Secretary, Board of Education, Whitehall, London, S.W.1. Other persons desiring information regarding the course and conditions of admission should apply to the Secretary, Imperial College of Science and Technology, South Kensington, S.W.7.

Our Sculptors' Handicap.

It must have often occurred to the critic to note how puny and insignificant is the figure of Washington, by Houdon, under the wall of the National Gallery at the east end of the main front. The reason is, no doubt, that the figure was never designed to occupy such a position. It is one of the striking examples of unfortunate setting referred to in a pertinent article in *The Parthenon* for April, by Mr. Gilbert Bayes, on the mistakes to be seen in the placing of London statues. In his short article Mr. Bayes offers some very sensible criticisms. The mistakes we have made are typical of our unfortunate dealings with sculpture. Examples specifically dealt with and criticised by Mr. Bayes are the statue of Lincoln in Parliament-square, the group of Burghers, by Rodin, in the gardens under the great tower of the Houses of Parliament, and the statue by Verrocchio near Hyde Park-corner. Readers who take the trouble to read his words in the *Parthenon* will realise the value of the sculptor's criticism.

Architectural Drawings, Florence.

Of exceptional interest to architects is the exhibition of drawings just opened in the Uffizi Galleries of Florence by Dott. O. H. Giglioli, the able Director of the Department of Prints and Drawings in that

From the Ancient Monuments Exhibition at the R.I.B.A.

The Dovecot, Dirleton Castle, East Lothian.

world-famed gallery. The material shown is architectural drawings by famous Tuscan architects of the XVIth and XVIIth centuries; these include Buontalenti, Ammanati, pupil of Sansovino and Michelangelo, who built the Ponte di Trinitá, enlarged the Pitti Palace and designed the great fountain of Piazza Signoria; Dosio, the two Sangallos, Baldassarre Peruzzi and Cigoli. At a moment when the new Florence railway station, which has been mentioned in these columns, is stirring up discussion, and threatening extremely modern treatment, these designs of the great old Florentine masters have very special interest, and should not be missed by those shortly visiting Florence.

Hospital Building Schemes. On another page will be found details of new hospital extension schemes which are shortly to go ahead. These form part of new building schemes of the value of over £400,000 which hospitals throughout the country are to set in hand. "These figures refer to schemes either being carried on or being put in hand at once," states Mr. H. B. Bryant, secretary of the Building Industries National Council, which instituted the inquiry. "They are, I think, an indication of the courage and confidence of hospital authorities as compared with the Government which still seems to see virtue in keeping one quarter of a million men on the dole rather than in employment creating national assets. While this week's announcement by the Ministry of Labour that there are 52,000 fewer unemployed in the building industry is indeed very welcome, the decrease in unemployment at this time would be in excess of 200,000 if the Government would take advantage of the opportunity, now the building season is before it, to reverse its costly policy of a negative economy and inaugurate a positive policy of planned national development. That the Local Authorities are anxious to proceed with such a sane policy of public works is proved by the fact of the recent deputation to the Chancellor of the Exchequer from the Northern Local Authorities pointing out the parlous state of their finances due to the stress of Poor Law costs arising from permanent unemployment among the people in their areas."

Buildings at Jerusalem. During Holy Week and Easter, ceremonies are being held at Jerusalem in connection with the opening of the new Y.M.C.A. building. Lord Allenby, the Commander-in-Chief of the Army which occupied the City of Jerusalem in December, 1917, is to open the new building, which conforms very well with the regulations of the town-planning scheme prepared at the request of the military authorities. The action of Lord Allenby and his advisers fifteen years ago is an interesting proof of the foresight of his staff, and their appreciation of architectural beauties. The original scheme was prepared by Dr. W. H. McLean, now M.P. for the Tradeston Division of Glasgow, and formerly Engineer-in-Chief of the Local Government section of the ministry of the Interior in Egypt. Owing to the improved conditions following the military occupation of Jerusalem, it was feared that there would be hasty and uncontrolled building operations, and that the obvious errors of the past would be continued. Many of the modern buildings were out of scale with their old surroundings. Large and conspicuous buildings had been permitted on prominent and unsuitable sites in the vicinity of the old city, and on the Mount of Olives. Very little repair work had been done for several years, and many of the older buildings were in danger of being either demolished or were being carelessly restored. Accordingly Dr. W. H. McLean was asked by the military authorities in Palestine to proceed to Jerusalem and report and advise upon what measures should be taken to institute the necessary control of building operations and town development. A proclamation was issued requiring that no person should demolish, erect, alter or repair the structure of any building in the city, or its environments, within a radius of 2,500 metres of the Damascus Gate, until he had obtained a written permit. A general plan was formally approved by Lord Allenby at his Advanced General Headquarters in Palestine on July 22, 1918. This general plan, along with a model of the scheme, in relief, may be examined to-day in the Imperial Institute in London.

Stained Glass Window, Cardonald Parish Church, near Glasgow.

By Mr. Gordon MacWhirter Webster.

Old Buildings in Jerusalem. Under the plan the majority of the new buildings to be permitted in the outer belt surrounding the city would be of the native type. This has a domed masonry roof, a mode of construction which has probably been evolved owing to the difficulty of procuring suitable and sufficient timber for roofs. With regard to the repair of private buildings in the old city, the municipality was advised to give what technical assistance might be necessary for this work. The practice of using graceful flying buttresses across the street, for the mutual support of old buildings, was encouraged. Since the War new maps have been prepared, in the light of which the scheme has been revised, and an excellent detailed town-plan prepared.

Richard Goulden's Sculpture. A unique exhibition is that now on view at 426, Fulham-road, which displays in charming surroundings much of the work of Richard Goulden, one of the most gifted artists of our time. The marvellous output of this sculptor's work may here be studied with great pleasure, and something like wonder at all he accomplished. His war memorials found especial favour in France, and his delightful memorial to Margaret Macdonald will not be forgotten in our time.

Another Threat to London. Yet another threat to the amenities of London is the proposal to build 90 flats and garages on the site of Queensbury House, at Richmond. The protests in *The Times* includes one from Philip Connard, R.A., who says if the proposal goes through it will completely destroy the architectural unity of Richmond Palace, Trumpeter House and the delightful Maids of Honour Row and for ever destroy the elegant amenities of Cholmondeley Walk.

GENERAL NEWS

EASTER HOLIDAYS.

Owing to the Easter Holidays, "The Builder" for the next week will be published on Thursday, April 13. Copy for publication in that issue should reach this office by first post Tuesday morning.

Professional Announcements.

Messrs. Adams, Thompson and Fry, FF. and A.R.I.B.A., have removed to new offices at 58, Victoria-street, S.W.1. The telephone number remains unchanged: Victoria 7087.

Messrs. J. S. Gibson and Gordon have taken into partnership Mr. H. B. Kebel Smith, A.R.I.B.A., and the practice will in future be carried on at 2, Devonshire-terrace, Marylebone-road, W.1, under the name of J. S. Gibson, Gordon and Kebel Smith.

R.I.B.A. Prizes and Studentships, 1933-1934.

We have received a copy of the R.I.B.A. Prizes and Studentships Pamphlet for 1933-1934, which contains full information upon the various prizes and studentships, together with, where applicable, the detailed programmes for the competitions. Copies are obtainable at the R.I.B.A., price 1s., exclusive of postage.

H.R.H. Prince George at Building Centre.

H.R.H. Prince George paid a surprise visit to the Building Centre, 158, New Bond-street, W.1, on Wednesday last. He spent the whole afternoon closely inspecting the exhibits, particularly those which bore some relation to industrial buildings and factories in which he is closely interested in his work at the Home Office. He was also specially interested in work pertaining to the construction of cheap houses.

Houses on the Watling Estate.

The L.C.C. on Tuesday considered a recommendation to expend £39,066 upon making good dry rot in houses on the Watling Estate, Hendon. The joint report of the General Purposes Committee and the Housing Committee states:—"We cannot but feel regret that the dry rot should have occurred, but we are convinced that, in the circumstances obtaining when development operations were commenced at the estate, the precautions with regard to drainage and ventilation were reasonable, and that they are sufficient now that the estate is established. The temporary defects which arose in the houses have been remedied, the houses are satisfactory in every respect and can properly be regarded as thoroughly sound and desirable, and we are satisfied that the estate is serving London admirably." After some discussion the recommendation was adopted. £6,445 has also been spent upon repairing damage to foundations of a number of houses.

Vacant Appointments.

The University of Durham is inviting applications for the post of Master of Architecture at Armstrong College, Newcastle-upon-Tyne. Details may be obtained from Mr. W. S. Angus, Registrar.

Applications are invited for the appointment of full-time head of the School of Architecture, Leeds College of Art, which will become vacant on September 1. Applicants must be in possession of the A.R.I.B.A. or a diploma of an architectural school. Forms of application may be obtained from Mr. W. J. Bees, Director of Education, Education Department, Calverley-street, Leeds, on receipt of a stamped addressed envelope.

Applications for the post of lecturer in Civil Engineering are asked for by the University of Leeds. Candidates must be graduates of a university and preferably members of the Institution of Civil Engineers. Particulars can be had from the Registrar.

The Newcastle-upon-Tyne Education Committee invites applications for the post of Head of the Mechanical Engineering Department at Rutherford Technical College. Details are available from Mr. Thomas Walling, Director of Education, Northumberland-road, Newcastle-upon-Tyne.

COMPETITION NEWS

Proposed Conference Hall, Redcar.

An architectural competition, it is understood, is to be held by the Town Council in connection with the building of a conference hall.

Granite Façade Competition.

The result of the prize competition organised by the Architectural Association for the Cornish Quarry Masters' Association was announced by Mr. A. B. Knapp-Fisher, F.R.I.B.A. (President, A.A.), at the Architectural Association on Tuesday evening. The conditions asked for a design for a façade to a newspaper office in granite.

The winners of the competition and the £50 prize are: 137, Messrs. Kenneth J. R. Peacock, A.R.I.B.A., and Brian O'Rorke, M.A., A.R.I.B.A. (joint authors).

Hon. mentions: 50, E. C. Kent, A.R.I.B.A., A.A.Dip.; 69, H. A. Townsend, Student R.I.B.A.; 128, G. D. Griffiths, A.R.I.B.A.; 132, Mrs. Hilary B. Lewis; 144, W. Crabtree, Dip. Arch., Liverpool, A.R.I.B.A. These designs, and a further 16, have also been selected for exhibition in Cornwall. One hundred and sixty-four competitors submitted 172 designs, including two from South Africa. The winning design is reproduced on page 578, and points from the report of the assessors—Messrs. Howard Robertson, G. Grey Wornum and A. B. Knapp-Fisher, FF.R.I.B.A., delivered by Mr. Wornum—will be found on page 573.

"HOUSES AND GARDENS"

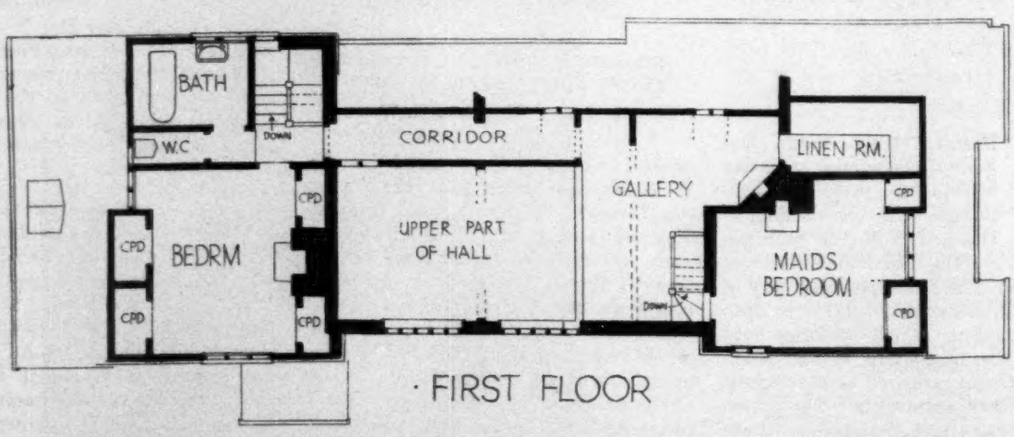
THE work of these two architects is well known to our readers, who will appreciate in book form* illustrations of the numerous houses, both large and small, which have been designed by them over a long period of years. Here the houses may be seen in their matured settings, with gardens in perfection. The volume contains fifteen coloured plates of houses, from sympathetic and poetical little water-colour drawings by Mr. Baillie Scott, portrayed in their garden settings. In addition there are 330 other illustrations, showing plans, elevations, interior views, gardens and fragments of detail. Each house possesses a distinct character of its own, from the humble labourer's cottage and the lesser house to the greater.

The authors have always recognised the necessity for preserving the countryside, and in the introductory chapter, entitled "England, Home and Beauty," they stress the importance of upholding the English tradition. The houses and cottages illustrated are evidence of their perfect suitability for the localities for which they were designed, both as regards style and materials used. Indeed, they seem to be part of the landscape. If more thought were given to this by some architects and others, we should have less criticism regarding the spoliation of the countryside, which, sad to say, is so widespread. "We are constantly hearing," write the authors, "of the 'threat of building' in country districts, as if building were a kind of evil disease. It never occurred to the old builders that their work was a disfigurement of their beloved country. Quite the contrary. It need not, and should not, be so now."

To those contemplating house-building, the study of this book should be pleasurable and instructive, with its numerous types and the varying accommodation provided. Its letterpress is written in an entertaining manner, understandable to the layman, who is not concerned so much with technical details, which is the architect's concern. Other chapters treat of "Old and New Technique," "The Symbolism of Building," "Labour Saving," "Furnishing," "Pictures," and there are notes on characteristics of materials. In these chapters there is much sound information, the outcome of practical experience. The chapter on "Furnishing" is instructive and with it we are entirely in accord. As can be seen in this book, the various furnished interiors have an inviting and homelike character, which is difficult to associate with some of the modern interiors furnished with steel furniture.

The volume is admirably produced, and is a pleasure to handle and to read. We illustrate two of the illustrations appearing in the volume.

*"Houses and Gardens." By M. H. Baillie Scott and A. Edgar Beresford, FF.R.I.B.A. 44, Doughty-street. Price 25s. net.



From "Houses and Gardens."

"Great Meadow," Ottershaw, Surrey.

MESSRS. BAILLIE SCOTT AND BERESFORD, FF.R.I.B.A., Architects. (*See also page* 565.)

CORRESPONDENCE

The Value of the Surveyor.

SIR,—Mr. Davidson's letter raises once again the question whether it is profitable for the owner to employ a professional surveyor to prepare bills of quantities or to rely on the architect and builder to complete the job on the basis of drawings and specification, leaving the builder to look after his own quantities. The claim that the surveyor saves 5 per cent. of the total cost is an extravagant one and certainly not in accordance with recorded facts.

While it is an admittedly difficult thing to compare like with like in this connection, it is beyond doubt that there is a growing tendency for architects to report experiences similar to that outlined by Mr. Davidson. I think Mr. V. J. Cooper has misread Mr. Davidson's letter. I may be wrong, but as I see it, a probable cost was required from a surveyor, who reported £1,450, the client's figure. Bills were prepared, but the total cost then brought out was £2,200, and the job was abandoned.

Later, the job was done on drawings and specification only at about the client's figure, £1,450, the only alterations being the omission of two small sculleries. Allowing a fair figure for these sculleries and other probable small savings, the conclusion must be that the quantities forced the cost of the job up.

It is interesting to note that architects in Glasgow are not satisfied with present methods. Thus the President of the Glasgow Incorporation of Architects, as reported in *The Builder:* "Attention had already been drawn to the loose methods which were still in vogue, particularly in their own area, of estimating for even entirely new work. Scheduling from incomplete particulars, which involved remeasurement, undoubtedly caused additional expense in measurers' fees and the possibility of extras, which were difficult to adjust and explain. The question was under the consideration of a committee of the Incorporation with the whole question of measurers' fees."

EN AVANT.

SIR,—I have to thank Mr. V. J. Cooper for his criticism of my letter on this subject. Might I point out that my remarks were made in reference to a definite statement made by a lawyer, that the employment of a chartered surveyor saved the client 5 per cent. on the cost of the work. Further, I stated that an architect trained as a surveyor, as I was, can do the surveying cheaper. It is open to anyone to dispute these statements, but my conclusions are based on forty-three years' experience. I thought I had made it clear that I was referring only to small contracts of, say, under £3,000.

Long after many of my architect friends had given up employing chartered surveyors for small contracts, I continued to do so from a sense of duty to an allied profession, until I found that it always killed the work. £100 in surveyor's fees on, say, a £1,450 job is a considerable sum, and any architect of experience should be able to carry out small contracts without excessive extras.

Naturally, clients of the type in question have little money for extras, and when one found that immediately the job was cancelled the client proceeded to a builder with one's plans, the reasonableness of raising this question is obvious. In many cases the clients refused to return the plans, thinking that architects supplied plans and estimates free, as speculative builders and furnishers do.

With regard to Mr. Cooper's alternatives, (a) being answered by above, it follows that (b) may be taken for granted. We hear a lot about the day of reckoning from surveyors, but forty years ago we had no greater difficulty with extras than we have to-day. I would remind Mr. Cooper that surveying as an independent profession is of comparatively recent date, and I know of no records which state that surveyors were employed at the building of Durham, Lincoln or Ely cathedrals.

To state that it should be compulsory for an architect trained as a surveyor to employ a chartered surveyor is nonsense. To assume that an architect who is an artist cannot be practical or businesslike is also nonsense. Sir Robert Lorimer was a great artist, and from my knowledge of him I should state that he was certainly practical and most businesslike.

It is unfortunate that a searcher after truth with a desire to find the best way of doing things should be considered antagonistic and inspired by feelings of animosity when he ventures to criticise the existing order of things.

WILLIAM DAVIDSON.

Paid Secretaries and Honorary Workers.

SIR,—Since the War many amenity societies and associations have sprung up all over the country. Committees and panels of such are doing more or less useful and valuable work. The practice is usually to appoint a paid secretary with one or more of a salaried staff of typists. This staff may be centrally situated, and it then proceeds to appeal for honorary professional workers. I am continually appealed to by people, who in some cases I have never seen in my life, and am never likely to see, to supply information, make surveys, write reports and in some cases give estimates as honorary work, to be handed over to paid secretaries, who incorporate such information in the annual reports of their society as evidence of their great and useful activities.

The secretaries of such societies may draw a salary of anything from £200 to £400 a year, and it would appear that they rarely leave their offices to do any actual work. It is handed to them complete by some provincial architect for them to copy into their societies' annual report over their signature.

They acknowledge neither the help of a provincial society nor the services of a highly skilled professional man who, through his love of a great cause or enthusiasm for progress or protection and amenity work, has rendered his services in an honorary capacity without even the courtesy of having his services acknowledged in the annual reports.

In the course of many years' experience of such work and treatment, the present writer has only once received a professional fee under the said circumstances, even in a case where the paid secretary was receiving a salary, and who expressed surprise that I had been so unkind as to expect to be paid for services rendered to such an influential body, doing a great and noble work.

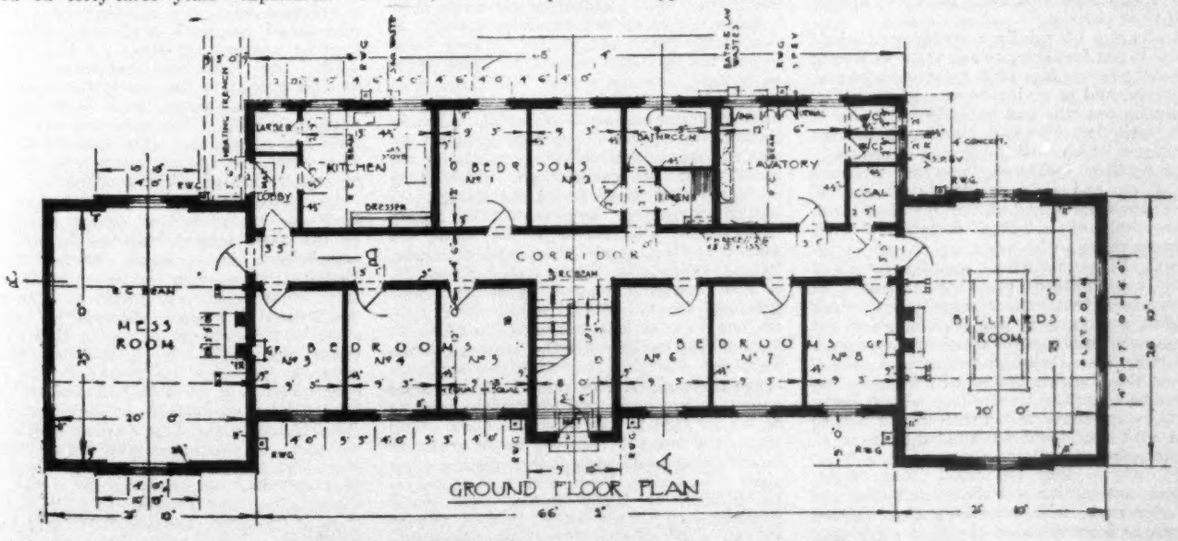
To make a gracious acknowledgment for such services in an annual report would cost nothing but a few pence to the compositor and printer, and is surely to be expected by one sportsman from other sportsmen. By such methods a society may gain a world-wide reputation as experts without moving out of their council chamber. Such things ought not to be.

W. D.

The Housing Bill.

SIR,—It is said that any stick is good enough to beat a dog with, and no statement seems to be too wild if directed at the speculative builder. It is, however, high time that the fiction as to the whole of the subsidies having gone into the builders' pockets were laid to rest. Mr. Boulton puts these subsidies at something like £100 for each house, and obviously wishes us to believe that the builders received such amounts as either profit or in addition to profit. To all those having experience or inside knowledge of the finance of houses built speculatively, such a statement is known to be so wide of the truth as to be deemed an absurdity not worthy of reply. It would not, however, do to let it appear uncontradicted in *The Builder*, for it might thereby gather weight and become dangerous.

J. R. TAYLOR.



Home for Mental Defectives, Colchester: Male Staff Block.

MR. JNO. STUART, F.R.I.B.A., Essex County Architect.

THE ROYAL INSTITUTE OF BRITISH ARCHITECTS

PRESENTATION OF ROYAL GOLD MEDAL

On Monday evening, at the R.I.B.A., in the presence of a large and distinguished gathering, the Royal Gold Medal for Architecture was presented by the President, Sir Raymond Unwin, to Sir Charles Reed Peers, President of the Society of Antiquaries and Chief Inspector of Ancient Monuments and Historic Buildings, H.M. Office of Works. Before making the presentation Sir Raymond, in the course of an address, said one of the great poets of that Victorian era in which the earlier half of his (the speaker's) time fell, when wishing to recreate the illusion of beauty in life which he felt had then passed away, called on his readers to

"Forget six counties overhung with smoke,
Forget the snorting steam and piston stroke,
Forget the spreading of the hideous town."

From the pleasure of the workman in his work, and from the joy in life, Morris believed that any general revival of the love of beauty and the power to create it must spring. That night, like the poet, he was asking them to realise, as Morris did, the importance of tending the flame still flickering in that lamp of beauty, of preserving and handing on undamaged all of building and equipment that still bore in its beauty the impress of work done under different conditions and inspired by different impulses.

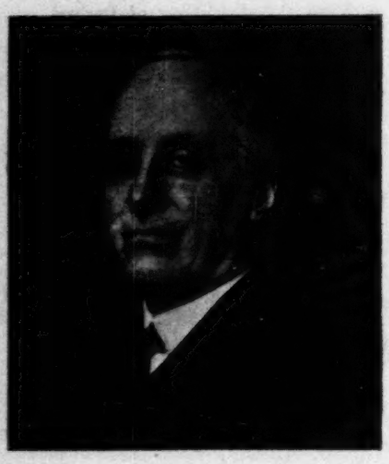
When in 1877 Morris, despairing of any immediate turn in the tide, helped to found the Society for the Protection of Ancient Buildings which Mr. Powys now so ably conducted, he was concerned indeed for their preservation, but even more concerned to protect them from restoration! He (the speaker) need only recall the restoration and re-restoration of St. Mary's spire in the High at Oxford to remind them of the controversy, in which there figured the distinguished architect and Gold Medallist, Sir Thomas Jackson, from whom their guest that night received his early training. To quote from Morris's statement of the Society's principles: "In fine, to treat our ancient buildings as monuments of a bygone art, created by bygone manners that modern art cannot meddle with without destroying. Thus and thus only . . . can we protect our ancient buildings and hand them down instructive and venerable to those that come after us."

He craved their pardon for so long an introduction; his excuse must be the desire to enhance the worthiness of the little ceremony he had to perform that night by associating with it the spirit of a great man of the past who would have had such hearty sympathy with their purpose.

It was now his privilege, speaking on behalf of the Royal Institute, to ask them to join in according recognition to a great work of preservation, and in giving honour to a remarkable man, one who had not only accomplished that work, but who had largely created the technique which had made the accomplishment possible. On many previous occasions the King had been graciously pleased to confer the Gold Medal on men who had themselves designed buildings deemed by their contemporaries to be deserving of such recognition. Distinguished as was the record of work accomplished by that company of recipients of that honour since its institution in 1848, and great as was the number of our fine modern buildings for which we owed them gratitude, even they had not escaped subjection to the changing temper of our times; for there were among them those whose works would be acclaimed to-day with less unanimity than when the Medal was handed to them, on a date comparatively recent.

He whom they honoured that night, scholar, antiquarian and architect, had chosen a better part; with a modesty that befitted a man so learned, with the filial piety that was the highest grace of an archæologist and the surest guide to the enthusiastic architect restorer, he had chosen to devote his life to preserving for us and for our children the irreplaceable heritage of great and lovely buildings which our forefathers left for us, instead of seeking to add a new quota of his own. That heritage had for architects an inestimable value as a record of the evolution of their craft; but for them all, whatever be the manner of their life and calling, that heritage enshrined a still more precious record of the life of our forefathers and of the developing culture of our race. However highly we might prize our material progress, and it was by no means to be lightly prized, that culture still remained our supreme possession. It was that for which the world had respected those who had created and fostered it; and whether we, and they who followed after us, would win a like respect would depend, not on the magnitude of our mass productions, but on the care with which we cherished, and the success with which we continued to develop, that inheritance which we summed up in the word "Culture."

To that most worthy task Sir Charles Peers had made a great contribution; impelled by no thirst for fame or fortune, but moved by a genuine love for the beautiful and reverence



Sir Charles R. Peers, Royal Gold Medallist, 1933.

for the old, he had saved those great monuments from decay, added generations to their endurance, and created for them a setting so appropriate as to add greatly to their value and to the ease with which their story might be read.

He (the speaker) ventured to predict that however future generations might differ in their estimate of the buildings designed by this or that Gold Medallist, gratitude for the good work of preservation which they acclaimed that night would not change. It would continue so long as Whitby Abbey stood out as a landmark to the North Sea sailor; or the great Abbeys of Riveaulx, Byland, Fountains, and, nearer home, St. Albans, remained to tell us of that very different society which could create such masterpieces: so long as men might follow at Richborough or Caerleon the footsteps of the Romans, so long as they might see at Stonehenge the wonderful monument of even more ancient forerunners, and that might well be as far forward in the future as their origin lay in the dim past; so long would gratitude be felt for the good work of their distinguished guest that night. Why, even such names as Inchmahome or Kirby Maxloe were worth immortalising! They added to that Roll of Honour with pride and with confidence the name of Sir Charles Peers.

Sir Reginald Blomfield, R.A., and Mr. E. Guy Dawber, A.R.A. (two past Royal Gold Medallists) then escorted Sir Charles Peers to the platform, where he was invested by the President with the Royal Gold Medal, amid prolonged applause.

Sir Charles Peers, in reply, offered his "most sincere and humble thanks for a great and unexpected honour." In awarding him the Medal, he continued, they were honouring a Department of State and the men who had worked with him for the past twenty-five years—friends and helpers, skilful, learned and devoted, whose work had brought the care of ancient buildings from obscurity to the light of public fame. His gratitude for the honour conferred upon him was more than he could adequately express. Architecture, he proceeded, was not merely a matter of past, present and future, but a living science that might grow to heights yet undreamed of. We had in this country a tradition that should inspire men to do the best work they possibly could, and so be in the true line of succession to the great men of old. Time would never be lost that was devoted to the study of old work. Having referred to his approaching retirement from the Office of Works, the speaker said it had been his privilege to be associated with the first stages of a great work, and in conclusion he pictured that work being carried on by his remote successors, who would have to deal with the masterpieces of the early concrete period!

The Rt. Hon. H. A. L. Fisher (Warden of New College, Oxford), having observed that the relation of the State with ancient monuments was not always of the happiest description, and sometimes even non-existent, proceeded to pay a tribute to the work of Sir Charles Peers. As a governor of the two fourteenth-century Wykehamical foundations at Winchester and Oxford he had consulted Sir Charles regarding the preservation of both sculpture and brasses, and he had also the pleasure of being associated with Sir Charles as a Trustee of the British Museum.

The Rt. Hon. W. Ormsby-Gore (First Commissioner of Works) said that Sir Charles Peers had been associated with the Ancient Monuments Department ever since the passing of the Ancient Monuments Act of 1910. He had done his work with modesty combined with enthusiasm, and had laid the foundation of a tradition that, when the time came for him to go (unhappily this autumn) would continue. His was a work that extended more and more into the body politic, and when we compared the indifference with regard to ancient monuments that existed a few years ago with the extreme sensitiveness of public opinion to-day, it was apparent that better times were coming. Sir Charles, in his work, had achieved conservation without renovation, and had had a reverent care for all that he touched. Never had his work produced public criticism or aroused anxiety.

Sir Lionel Earle said that ever since 1912 he had worked in the closest touch with Sir Charles Peers, whose work had been entirely admirable. The Ministère des Beaux-Arts had assured him (the speaker) that the work done for ancient monuments here far surpassed that of other countries.

Dr. Cranage (Dean of Norwich) said that in France the control of ancient monuments by the State was not any too happy. The restorations, for example, carried out by Viollet le Duc, were really renewals on a tremendous scale, and surely a disaster to the history of France. Because we had the right man in charge of our ancient monuments, the confidence of this country had grown as the years had gone by. The foundation had been securely laid, and we could have the same confidence in the work of the Department in the future as we had had in the past. In connection with the addition to Norwich Cathedral, the speaker mentioned that they had consulted the Royal Fine Art Commission, the Central Council for the Care of Churches, and also Sir Charles Peers, and he was sure that the Dean and Chapter were wise in getting such efficient help in the great work to which they had set their hands.

THE LATE SIR JOHN SIMPSON

THE passing of Sir John Simpson will cause a feeling of sadness to many who knew him, both in this country and in France. Looking back over the years, I first remember him when he was working upon the Glasgow Art Gallery. Since those days he had designed and carried out many buildings of importance. The following are some of his works:—Roedean School; Queen Victoria Memorial, Bradford; Royal Sussex Regt. Memorial, Brighton; Onslow Ford Memorial, St. John's Wood; Grafton-street Hospital, Liverpool; offices of the Crown Agents for the Colonies, Millbank; Glasgow Art Gallery; Victoria Institute, Worcester; Cartwright Memorial Hall, Bradford; new buildings at Haileybury College, Gresham's School, Holt, West Downs School, Winchester, and Lancing College; board schools at Brighton, and numerous houses and other buildings throughout the country; British Empire Exhibition, Wembley; London depot for Messrs. Pilkington Bros., St. Helens.

Of these, I think the Roedean School, with its picturesque setting, always interested him, although I know he gave great thought and time to the Crown Agents' building, Millbank, and to the restoration of the Old Hall at Lincoln's Inn, which had been in his charge for many years. With his works at Wembley, beyond seeing early sketches, I am not conversant, but, when talking to Sir John, he never hesitated to give his partner, Mr. Maxwell Ayrton, full credit for carrying the burden and stress of this large and exacting undertaking.

Sir John was a great architectural scholar, especially in connection with the French Renaissance, and those who have studied his essays must have been strongly impressed by his profound knowledge of French history.

I recall an expression of appreciation by the late W. H. Ward of the kind thought and continued advice he had received from Sir John upon the revised edition of his book on the French Renaissance, one of the finest we possess on this subject. I ofttimes regretted that he did not publish more himself, especially in the strain of his "Paris Rosemary," so full of interest and romance, showing that deep sympathy with his subjects which makes his readers yearn to go wandering in Paris, exploring what he so delightfully portrays.

In later years he devoted himself to fine planning and architectural detail, of which he had a great knowledge. This meant much concentration and thought; but if he was satisfied that he had done the right thing, he never regretted the time spent. He was always endeavouring to do sincere work based on our traditional heritage.

In his kindness to and encouragement of the younger men he was generous, both with his time and the sound advice that he gave them in connection with their work, especially those closely connected with him.

His excellent services to the Royal Institute of British Architects, both as a member of its Council and then its President, are well known, and many reforms brought about during his years of office owe their origin to him.

Of late years his suffering at times through ill-health had been almost unbearable, yet he was always patient, and during the interludes hopeful. It was only a month or so since he remarked to me that he never thought a human being could suffer so much and then forget it. Alas, the forgetfulness was only temporary.

In writing these few words, I can only, with others, pay tribute to an architect and friend of great and outstanding ability whom we have lost, leaving the art he loved the poorer for his passing.

Whatever judgment time may give upon his work, he will always be remembered by those who knew him intimately as a sincere friend and a true artist.

Sir John was President of the R.I.B.A., 1919-21: an original Member of the Council of the British School at Rome; Membre Correspondant de l'Institut de France; Membre d'Honneur de la Soc. Hist. des VII-XV Arrs. de Paris; Membre des Soc. Historiques des VI et XVI Arrs.; Chevalier de la Legion d'Honneur; Officer de l'Instruction Publique; President de l'Union Franco-Britannique des Architectes, 1912-1923; Correspondent de la Société Centrale des Architectes Français; Grande Medaille de la Société des Architectes Diplomes; Correspondent of the Sociedad Central de Arquitectos, Buenos Aires, and of the Centralvereinigung der Architekten, Vienna; Gold Medal of the Société des Artistes Français, 1922; Honorary Member, Institute of Scottish Architects; Vice-President, Royal West of England Academy; Vice-President, British Society of Master Glass Painters; Architect to the Hon. Society of Lincoln's Inn.

His publications included: "Essays and Memorials" (1923), "Paris Rosemary" (1927), "Some Account of the Old Hall of Lincoln's Inn" (1928), "The Planning of Cities and Public Spaces," and other professional papers.

EDWIN COOPER.

The cremation took place on Tuesday last at Golders Green Crematorium, and among the mourners present were Mr. and Mrs. Esmond Simpson, Professor Graham Simpson, Mr. Gilbert Simpson, F.R.I.B.A., Mrs. Taylor and Mrs. Lee, Miss Lee (niece),

The late Sir John Simpson, P.-P.R.I.B.A.

Miss Ellis, Mr Burchall (solicitor), Mr F. H. Coleman, Mr. Frank W. Knight, F.R.I.B.A., and Mr. Henley Cornford, A.R.I.B.A. (partners), and Miss Morris (secretary), the chief mourners; Mrs. Cope Cornford, Sir Raymond Unwin, Sir Edwin Cooper, A.R.A., Sir Banister Fletcher, Mr. Maxwell Ayrton, Sir E. Owen Williams, Mr. H. A. Crouch, Mr. Arnold Silcock, Mr. Shirley Knight, Mr. Arthur J. Davis (representing Franco-British Union of Architects), Mr. Moharron (representing the Egyptian Minister), Sir Richard Winfrey, Mr. R. S. Rowe (representing Hon. Society of Lincoln's Inn), Mr. D. R. Taunton (representing Society of Master Glass Painters), Mr. A. T. Bean, Mr. Graham Mallett, Mr. W. J. Clark, Mr. Harvey Stringer, Mr. A. V Montagu, Miss Lawrence (Chairman of Roedean School), and Miss Child and Mr. Blyth (representing Roedean School), and others, were also present.

The Trevithick Centenary Exhibition.

The special exhibition to commemorate the death of the celebrated engineer, Richard Trevithick, which occurred on April 22, 1833, is now on view in the Main Hall of the Science Museum, South Kensington, until the end of June.

A FAÇADE IN GRANITE

WE give below some points from the report of the assessors in the prize competition organised by the Architectural Association for the Cornish Quarry Masters' Association. The subject was "A Façade to a Newspaper Office," and the result is given on page 570. The winning design, which we illustrate this week, is by Messrs. Kenneth J. R. Peacock, A.R.I.B.A., and Brian O'Rorke, M.A., A.R.I.B.A.

Mr. G. Grey Wornum, F.R.I.B.A., in his report, which was read on behalf of the assessors at a meeting of the Architectural Association on Tuesday last, said:—"When the assessors found 1½ designs hung up on the walls in the studio and the lecture-room, some of us on seeing all these designs felt that some architects are born great, some achieve greatness, and some grate on one! Because at first glance we could not find a design of outstanding merit that could make our task a bit easier. The reason for our difficulty in finding the winner was not so much on account of a low standard of design, but because certain basic problems of the design, particularly in regard to the material, had not really been properly considered by competitors. In the first place, there was far too much tendency to standardise the sizes of granite blocks, instead of realising that in quarrying granite a great variety of stone sizes arise, and people were rather apt to cut all stones to the same size and get their planning of façades by some kind of rhythmic jointing. Actually, for economy the variety of sizes of stone requires taking into account, as large stones as well as small may be used to advantage. Secondly, lintols were not very much considered in the way of windows, as large pieces of stone and masonry were divided up with vertical joints and stones then cut away at the back to hang on steel joists. This cutting away at the back of the stones is a very expensive policy, and large stones, which are quite easily obtainable, are themselves suitable stones for lintols. The same mistake arose in some of the methods of supporting the front of the building. Granite is capable of taking extremely heavy loads, and it is not necessary to case stones round steel stanchions when you can use the solid material to support the building.

"Then, architecturally, rather than constructionally, as regards the character for a newspaper office and its possibilities, solutions in the main have proved rather too dull. Practically all competitors have found great difficulty in getting proper relationship of scale between lower and upper parts of the façade. The entrance doorway has been too low and too pinched in width in many cases. I cannot say personally I think it was an easy problem you were set, but it was a very interesting one. Architecturally, again, competitors seemed completely scared of ornament or mouldings, and in most cases finished the top of their building right against the skyline. Plenty of light ornament is possible by means of sand-blasting granite as well as by carving, and sand-blasting reliefs of half-an-inch are quite easily possible and very effective, and great variety can be obtained by taking into account the polishes and sand-blasting processes and thus enabling reliefs in two colours to be obtained.

As to the prize-winning design (No. 137), I think the assessors all felt it was made on very sound lines architecturally without resort to acrobatics or gymnastics. The entrance doorway is felt a little too small in scale, and we thought the upper windows a little too small for the lower window, but we were all unanimous in choosing it as the prize design, and we consider the design, if it was carried out, would be very effective. It was suggested there might have been more mouldings, because moulding is by no means extravagant, and also the coping might not have been so heavy. From a quarrying point of view the equal stones between the windows and light bands are not an economy, and possibly mean cutting all to equal sizes, and they are also cut back to hang on the steel work again, which is extravagant.

The use of the polished granite was considered a very good point and quite an economical one from a working point of view. The stones at the sides, as you see, are not regular, and are quite good in jointing. Taken as a whole, I think the assessors congratulate the winners very heartily on this effort.

No. 132 design, by Mrs. Hilary Lewis, is very striking for its proportions, though perhaps just a little extravagant because the doorway has got rather too crushed down. The upper transome has been kept well above eye level. The stones here have been made a little too regular in sizes, although there is some quite good work with large stones.

Design No. 50, by Mr. E. C. Kent, is, I think, a little great-grandfather of the Marboeuf Garage in Paris, but it is an interesting design. . . I think the doorway itself might have been a little more interesting, but the general proportions of the windows are very good.

Design No. 60 (Mr. H. A. Townsend) is a very sound design, but perhaps a little bit on the quiet side for the purpose of a newspaper office. Its granite is a little lighter and more interesting at the top than most.

Design No. 128 (by Mr. G. D. Griffiths) has the name of the paper in raised letters, which have been utilised by several competitors. This is very expensive, because letters ought to be cut into the granite, and projecting letters should be avoided.

Design No. 144 (by Mr. Crabtree) was a very attractive drawing, but not very interesting in its upper part, and I do not think the design of the large window quite comes off. The stones are a little too regular to be economical.

ILLUSTRATIONS

PLATES.

"Houses and Gardens."

We illustrate in this issue two examples of the work of Messrs. Baillie Scott and Beresford, taken from their recently published book on "Houses and Gardens," a review of which appears on page 570.

Conversion of 58, Queen Anne-street, W.

This house, 58, Queen Anne-street, Cavendish-square, was built about 1765, and, having been converted to the purposes of the British College of Obstetricians and Gynæcologists, was recently opened by the Duchess of York.

The internal planning, consisting of spacious and well-proportioned rooms, formed an ideal setting for the panelled walls and the beautiful ceilings, enriched and moulded in the Adam style. The redecorations, carried out in quiet unobtrusive tones, give expression and dignity to the period mouldings. The alterations and renovations were carried out by Messrs. W. H. Gaze and Sons, Ltd., of Kingston-on-Thames, under the supervision of Mr. A. Alban H. Scott, F.R.I.B.A., Mrs. Maufe, in conjunction with Mr. Scott, being responsible for the redecoration and furnishings.

"Kings' Stone House," Kingston-on-Thames.

Recently completed for Messrs. Cox and Martin, of Kingston-on-Thames, this building has been erected on a site previously occupied by dilapidated timber-built premises, situated in High-street, Kingston-on-Thames, immediately adjoining the Norman Clattern Bridge, which runs over the Hogs' Mill River. The new premises comprise one large shop, entrance hall, and two offices on the ground floor, and on first and second floors are spacious suites of offices, together with separate lavatory accommodation for both sexes. The offices are equipped with the latest systems of telephonic communication and electric lighting. The building throughout is heated by electricity.

The front of the building, facing High-street, and the side elevation, facing the Hogs' Mill River, together with the overhangs and gables, have been constructed with solid English oak half-timber work, backed by brickwork, the panels on the outside being filled in with Atlas White cement and 2 in. red facing bricks respectively. The windows have steel casements and fanlights, set in English oak frames, mullions and transoms. The roof is covered with hand-made sand-faced tiles. The entrance doors, in Austrian oak, open into an oak-panelled hall and oak staircase. The walls around the landing and the two principals' rooms, on the first floor, are oak-panelled to a height of 5 ft. 6 in., and the steel beams and stanchions in the rooms are encased with Austrian oak.

The clock, which overhangs the footpath, has been modelled on a replica of the actual Coronation Stone (now standing opposite this building), complete with correct finial designs and hieroglyphics. The carved oak name panel over the entrance doors incorporates the apocryphal heraldry of the Saxon Kings crowned on the Coronation Stone, the English Rose, and modified designs of the pillars' finials, all picked out in colour.

Owing to the nature of the site and the fact of the river running along the side thereof, the whole building rests upon a system of nineteen reinforced concrete piles, averaging 19 ft. deep, together with steel girders encased in concrete. The contractors for the foundation work were the Pressure Piling Co., Ltd. Piling and the general foundations construction work was carried out by Messrs. Limpus and Sons, Ltd., of Kingston Hill, Surrey. The whole of the superstructure was carried out by Messrs. W. H. Gaze and Sons, Ltd., of Kingston-on-Thames.

The following firms were associated with the work :— Matt. T. Shaw and Co., steelwork; Fredk. Hodgson and Co., electric lighting, heating and telephonic systems; H. T. Warner, Ltd., roofing tiles; London Brick Co. and Forders, Ltd., carcassing bricks; John Sims (Claygate), facing bricks; George Wragge, Ltd., steel casements and leaded lights; C. W. A. Banks, Ltd., wall tiling and pavings; Milners' Safe Co., Ltd., strong-room door; A. Lyon and Co., and Gillett and Johnston, external clock and synchronised internal clocks; Adamsez, Ltd.; sanitary fittings; The Complete Plasterers, Ltd., internal plastering; The Standard Flat Roofing Co., asphalt roofing; Yannedis and Co., locks and door furniture; Smiths' Systems, Ltd., office equipment.

The architect was Mr. Stanley P. Anderson, F.R.I.B.A., of Kingston-on-Thames, and the consulting engineers were Messrs. S. H. White and Son, of Westminster.

Home for Mental Defectives, Colchester.

The scheme illustrated forms an extension of the present Royal Eastern Counties Institution, Ltd., which is now accommodated in what was originally the old Great Eastern Railway Hotel at Colchester, which has been adapted and extended from time to time. Of late years, the increasing needs of the Institution made it imperative that new buildings on a considerable and comprehensive scale should be provided, and the drawings now reproduced indicate the nature of the proposals.

The public authorities jointly concerned are the Essex and Cambridgeshire County Councils and the Joint Committee of the East and West Suffolk County Councils. The whole scheme will occupy a site of 52 acres, and when completed will comprise the following buildings :—

21 blocks for 52 patients each, being 10 blocks for male patients, 4 blocks for female patients and 7 children's blocks; and, in addition, 2 special blocks for 40 low-grade patients each, giving a total accommodation for 1,172 patients; administrative block, hall to seat 1,000 complete with stage, dressing and cinematograph rooms, kitchen and domestic staff block, with stores and bakery block adjoining; workshops for 350, laundry, power house, male staff block for 24 attendants; women's workroom for 100; nurses' home for 69 nurses; school for 200 children; hospital for 63 patients; deputy medical superintendent's residence, mortuary block and lodges.

The estimated cost is nearly £420,000. Of the above scheme, the following are included in the portion now in course of construction: 8 blocks for male patients, kitchen and domestic staff block, a portion of the workshops, the laundry power house, male staff block and lodges. Messrs. F. R. Hipperson and Son are the general contractors, and their contract amounts to £146,359. This sum does not include the laying out of the grounds, which will be done by the patients.

Each patients' block is planned around a courtyard to aid compact planning and give the maximum of light and air in the rooms. The day rooms will also be used for meals, and one of the glazed partitions is made to fold to facilitate this purpose. The meals will be brought from the main kitchen in heated food trollies, and a small kitchen is provided in each block for serving purposes.

Pending the building of the administrative block, which forms part of the complete scheme, certain of the rooms in the kitchen block will be utilised to provide temporary office accommodation. The laundry will cater for the whole scheme when completed, as well as for the present Institution, and will be able to deal with 48,000 articles per week.

The main entrance to the Institution is in Turner-road, and a separate entrance will eventually be provided from the same road on the south of the site for coal and stores, etc. A subway will be provided from the power house along the North Drive, North Ring-road, back to the power house. This subway will accommodate the mains for heating, hot-water service, gas and water, electric and telephone cables. The power house will accommodate four "Economic" boilers. All the buildings, except the lodges, will be heated by steam at or below atmospheric pressure, circulated by means of vacuum pumps in the pump-house.

A water-softening plant will be installed in the pump-house, and the water, after treatment, will be pumped into a 3,000-gallon tank in the water tower, and utilised for the laundry hot-water services and boiler feed make-up. An additional tank for 2,000 gallons of mains water will also be provided in the water tower.

Adequate provision will be made for fire protection, and hydrants will be installed on a ring water main at frequent intervals, also buildings used for residential purposes will be supplied with internal hydrants. Electric light and power will be supplied by the Colchester Corporation.

The buildings will be brick-built, faced with local sand-faced bricks, and the roofs covered with hand-made sand-faced tiles. The floors will be of fire-resisting construction, and staircases of artificial stone. The floors of all principal rooms will be laid with wood blocks, other floors being of granolithic, quarry tiles or terrazzo; the walls of main and small kitchens, lavatories, bathrooms, sculleries, etc., will be tiled.

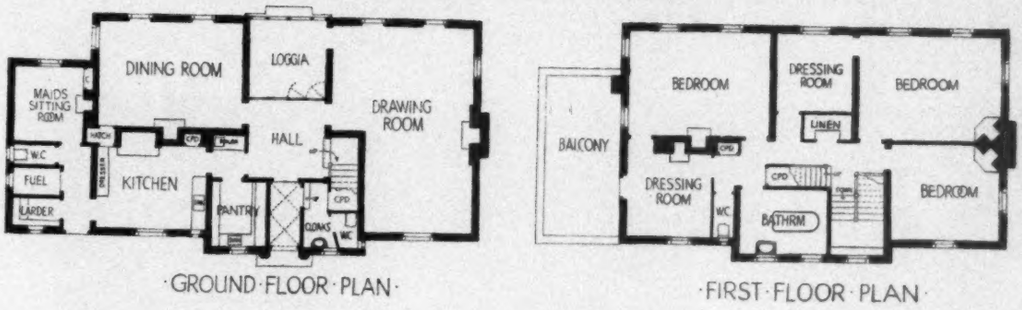
The following firms are associated with the work :—Messrs. Master Floors, Ltd., suspended floors and flats; Hope and Sons, Ltd., steel windows and lanterns; Dorman, Long and Co., Ltd., constructional steelwork, trusses, etc.; W. and C. French, Buckhurst-hill, reinforced concrete construction.

The architect is Mr. J. Stuart, F.R.I.B.A., the County Hall, Chelmsford, Essex.

Westminster Building Scheme.

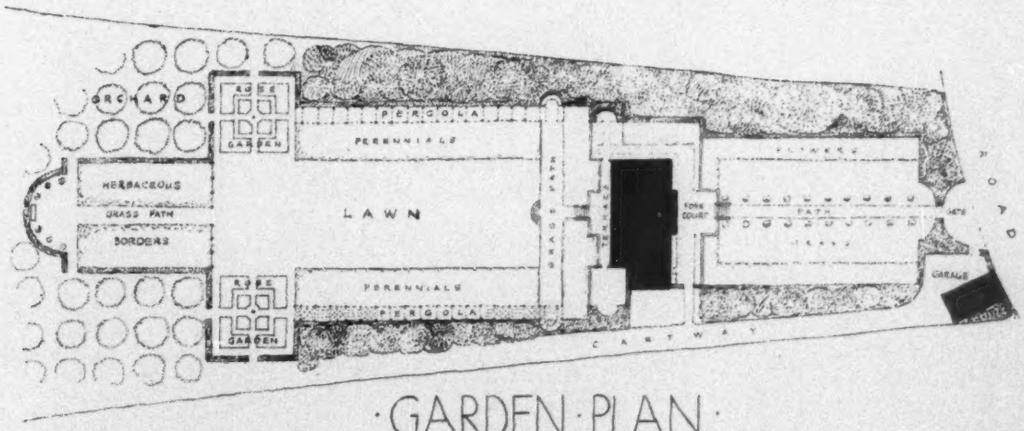
Westminster City Council has considered the question of deferring the closing of College-mews pending the receipt of further information as to proposals for a development scheme affecting property in Abingdon-street and Great College-street. The scheme put forward by Messrs. Leaning and Sons, John-street, W.C.1, provides for the closing of College-mews and the erection to the full height allowed by the London Building Act, 1930, of a new building in Abingdon-street. The General Purposes Committee report that the Dean and Chapter of Westminster Abbey and the governing body of Westminster School oppose the scheme.

ENTRANCE FRONT.



·GROUND·FLOOR·PLAN·

·FIRST·FLOOR·PLAN·

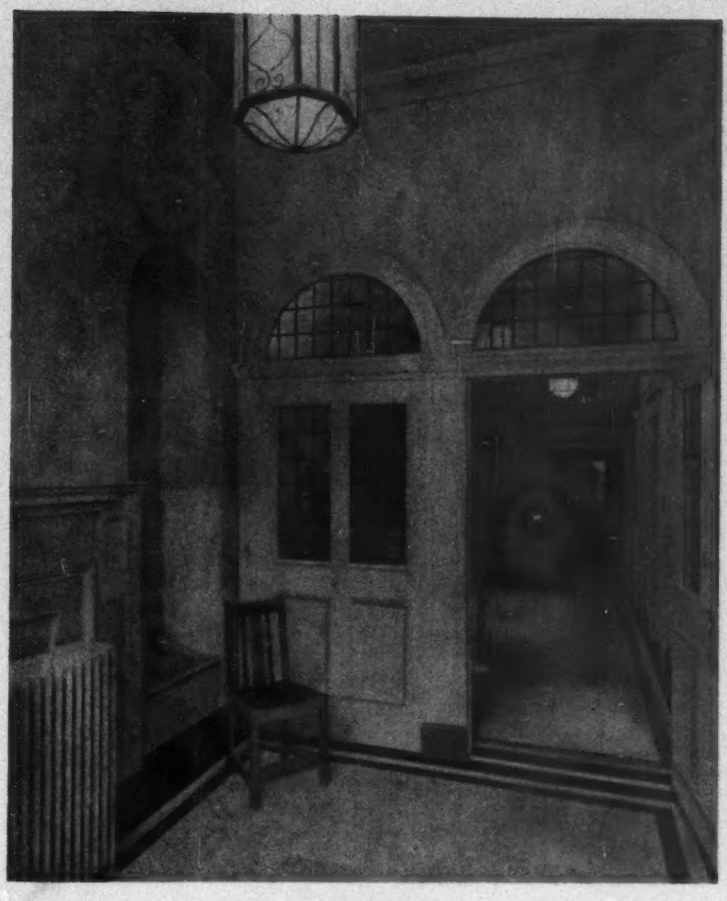


·GARDEN·PLAN·

From "Houses and Gardens."

"Bennington," Saltwood, Kent.

MESSRS. BAILLIE SCOTT AND BERESFORD, FF.R.I.B.A., Architects.

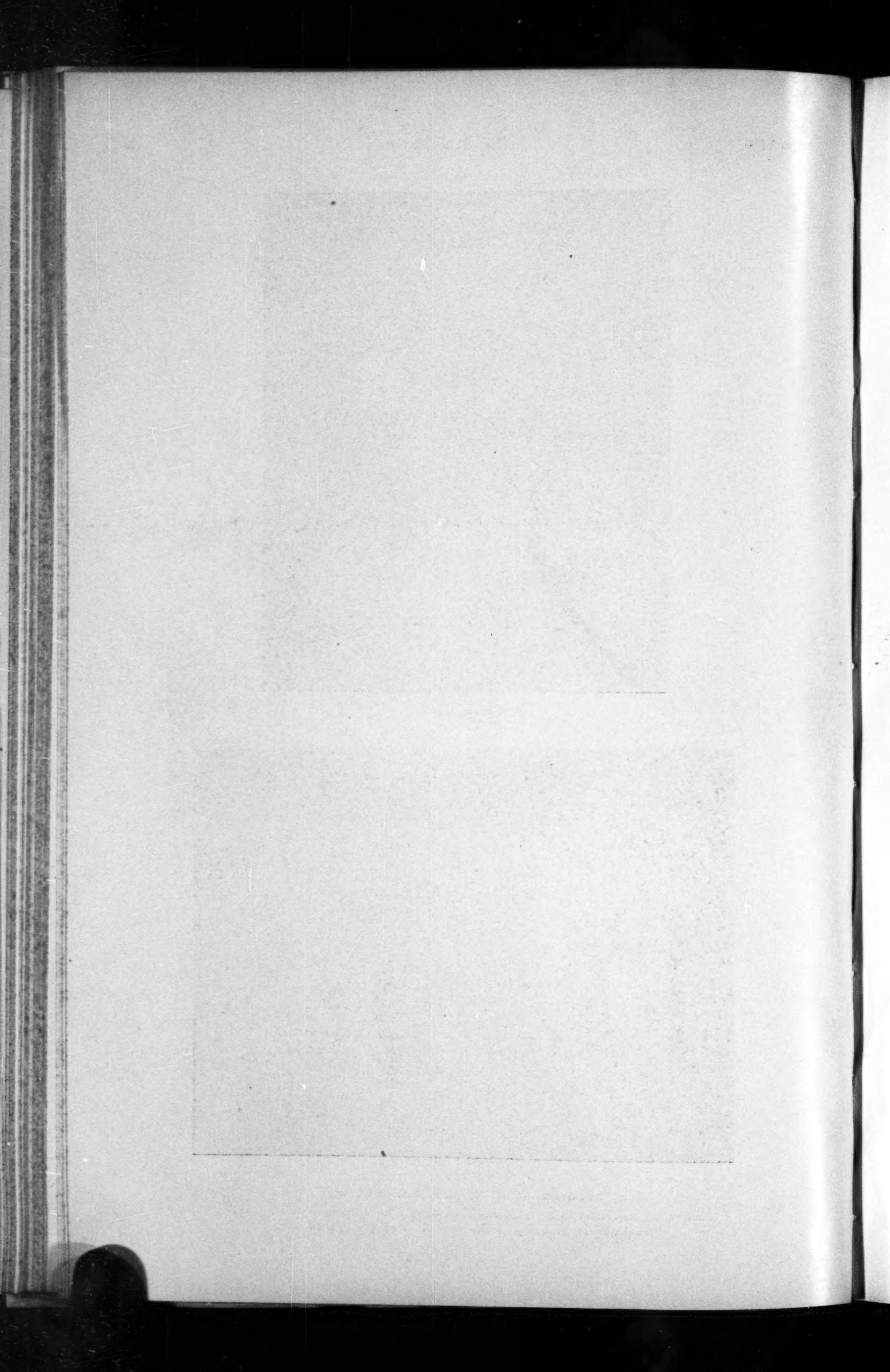


ENTRANCE HALL.

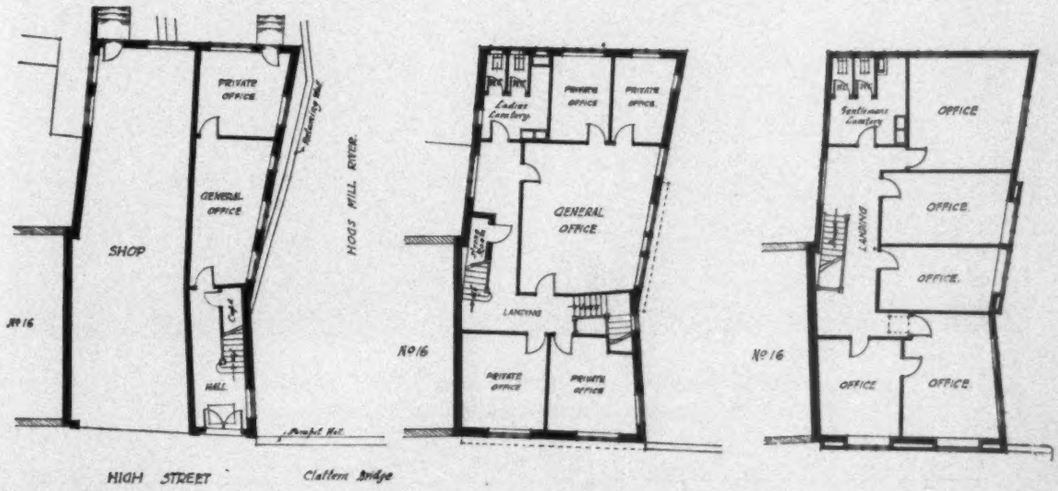
THE LIBRARY.

Conversion of No. 58, Queen Anne Street, W.

Alterations and Renovations carried out under the supervision of MR. A. ALBAN H. SCOTT, F.R.I.B.A.
Redecoration and Furnishings by MRS. MAUFE, in conjunction with MR. SCOTT.



GENERAL VIEW.

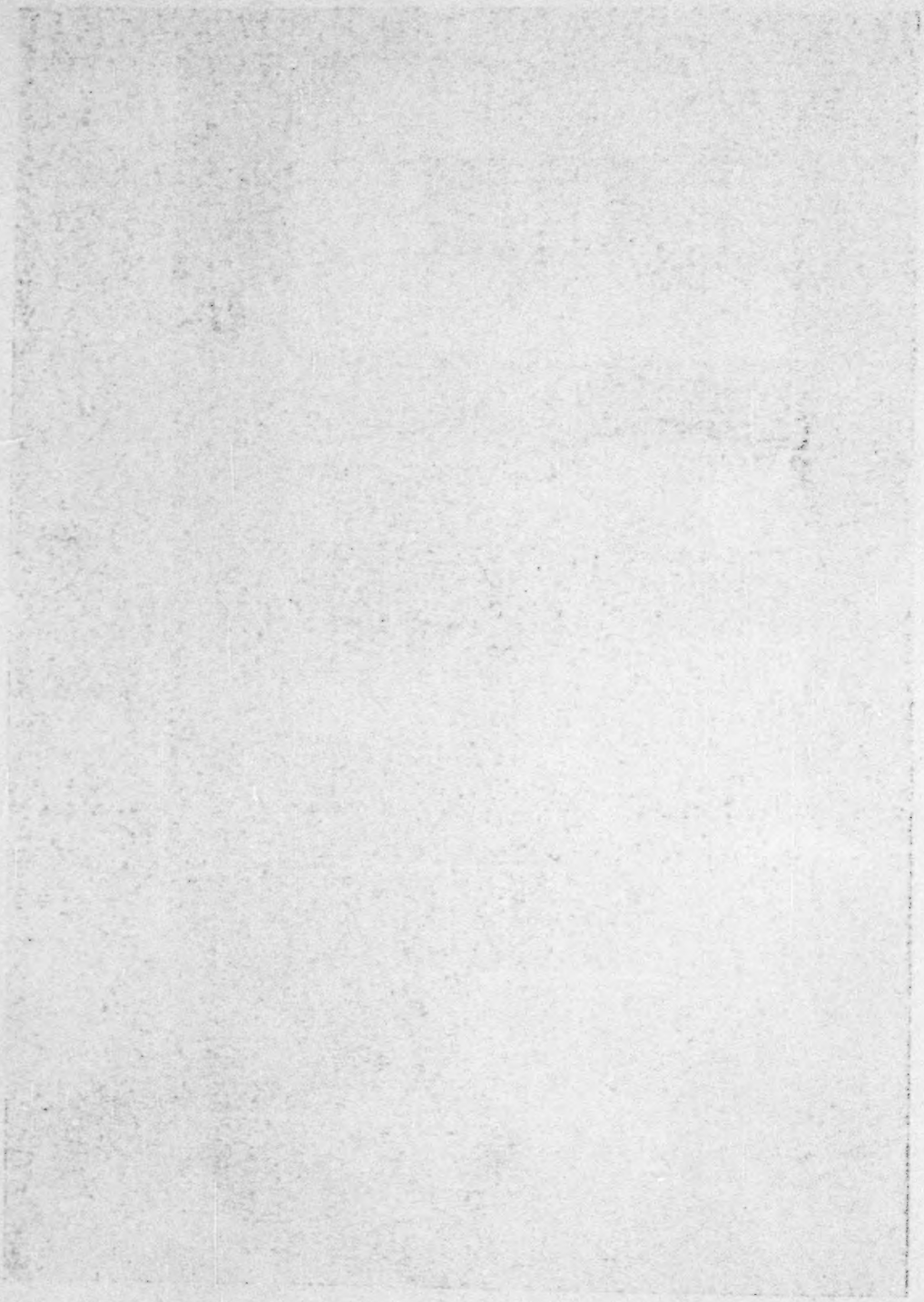


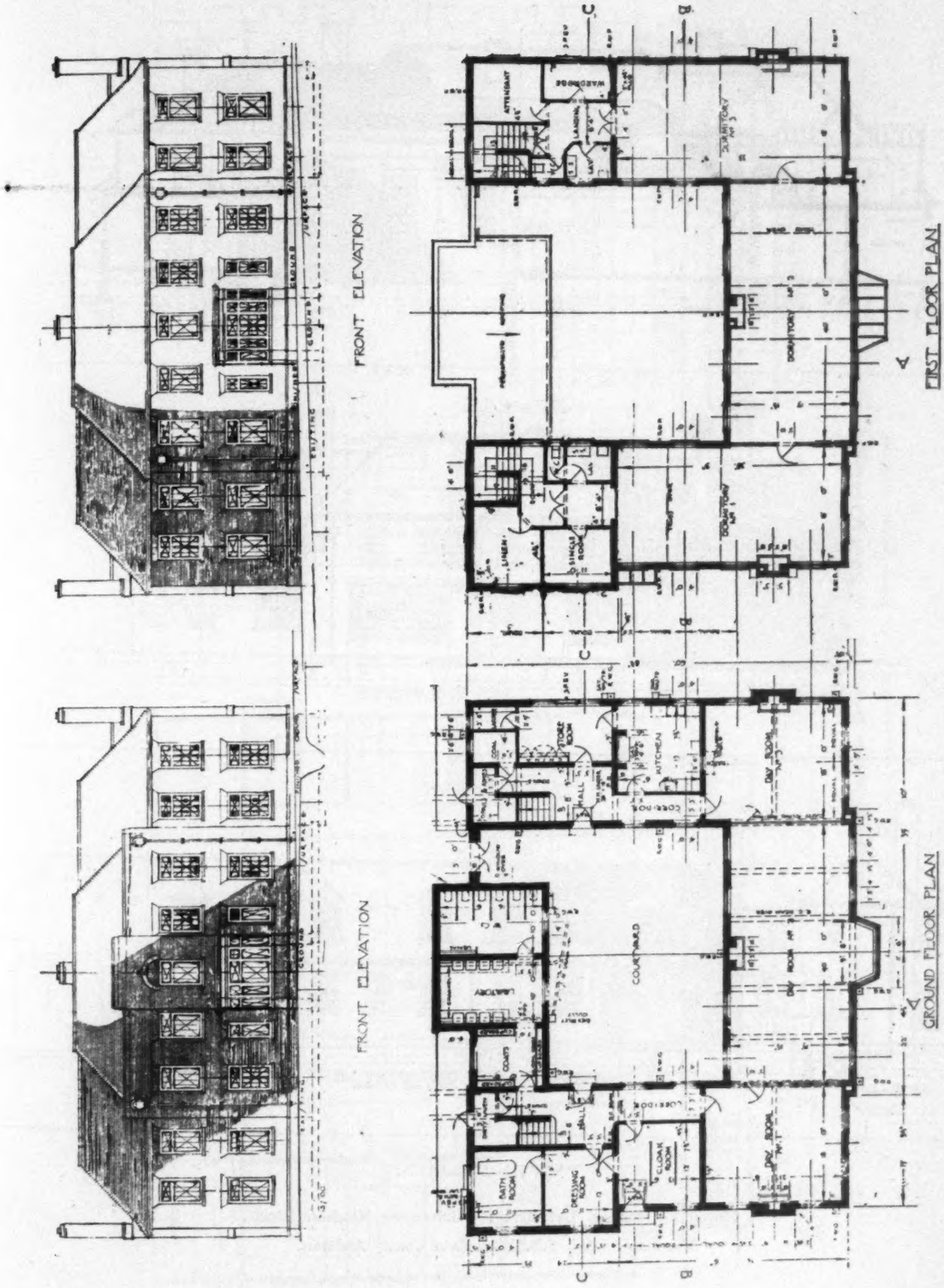
"Kings' Stone House," Kingston-on-Thames.

MR. STANLEY P. ANDERSON, F.R.I.B.A., Architect.

Newspaper Office Façade Competition: Winning Design.

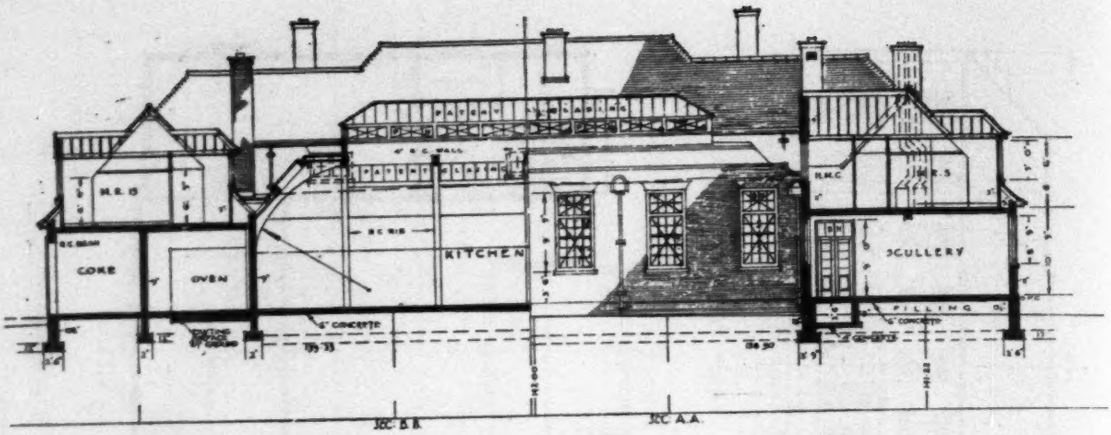
By Messrs. Kenneth J. R. Peacock and Brian O'Rorke, AA.R.I.B.A.



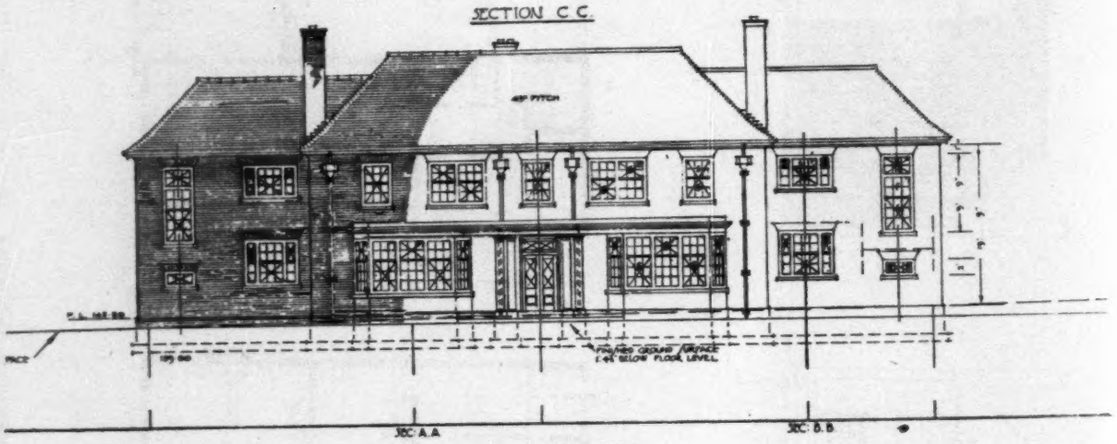


Home for Mental Defectives, Colchester: Blocks for Men Patients.

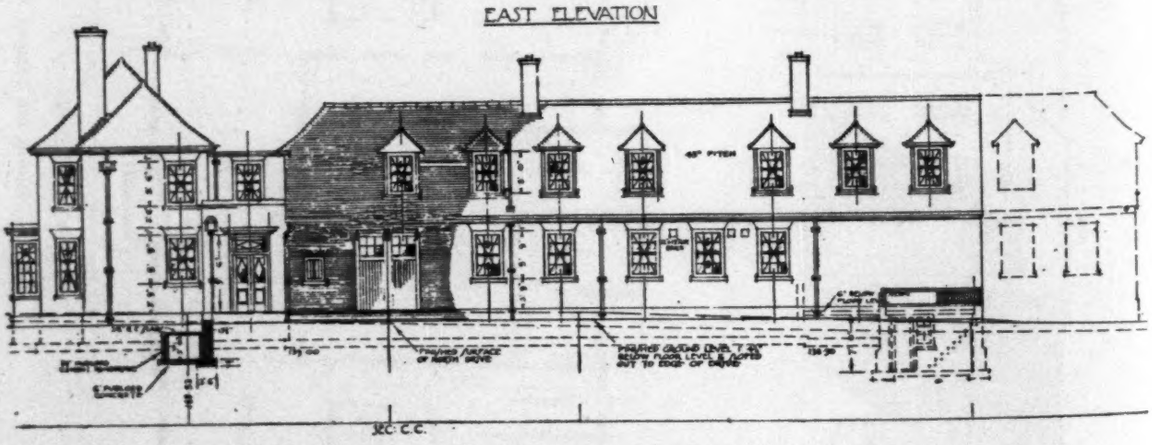
Mr. Jno. Stuart, F.R.I.B.A., Essex County Architect.



SECTION C.C.



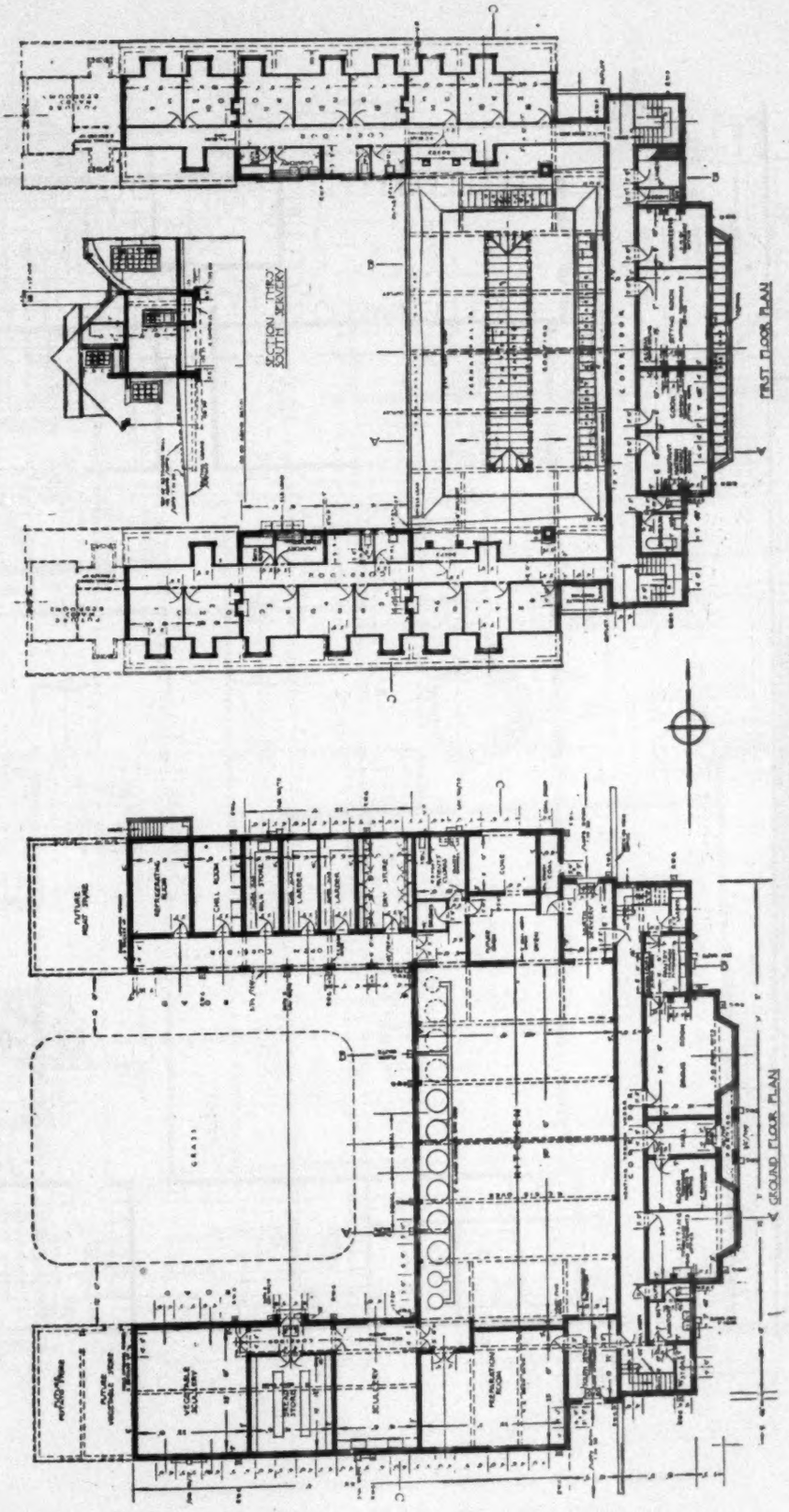
EAST ELEVATION



NORTH ELEVATION

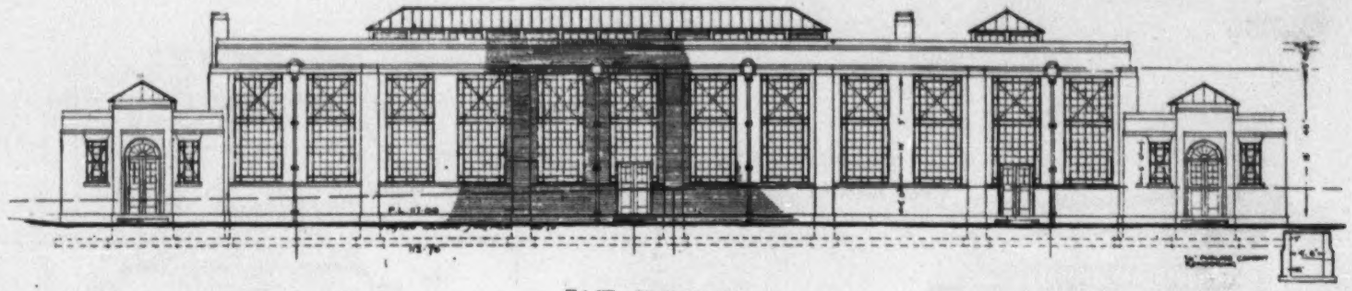
Home for Mental Defectives, Colchester: Kitchen Block.

Mr. Jno. Stuart, F.R.I.B.A., Essex County Architect.



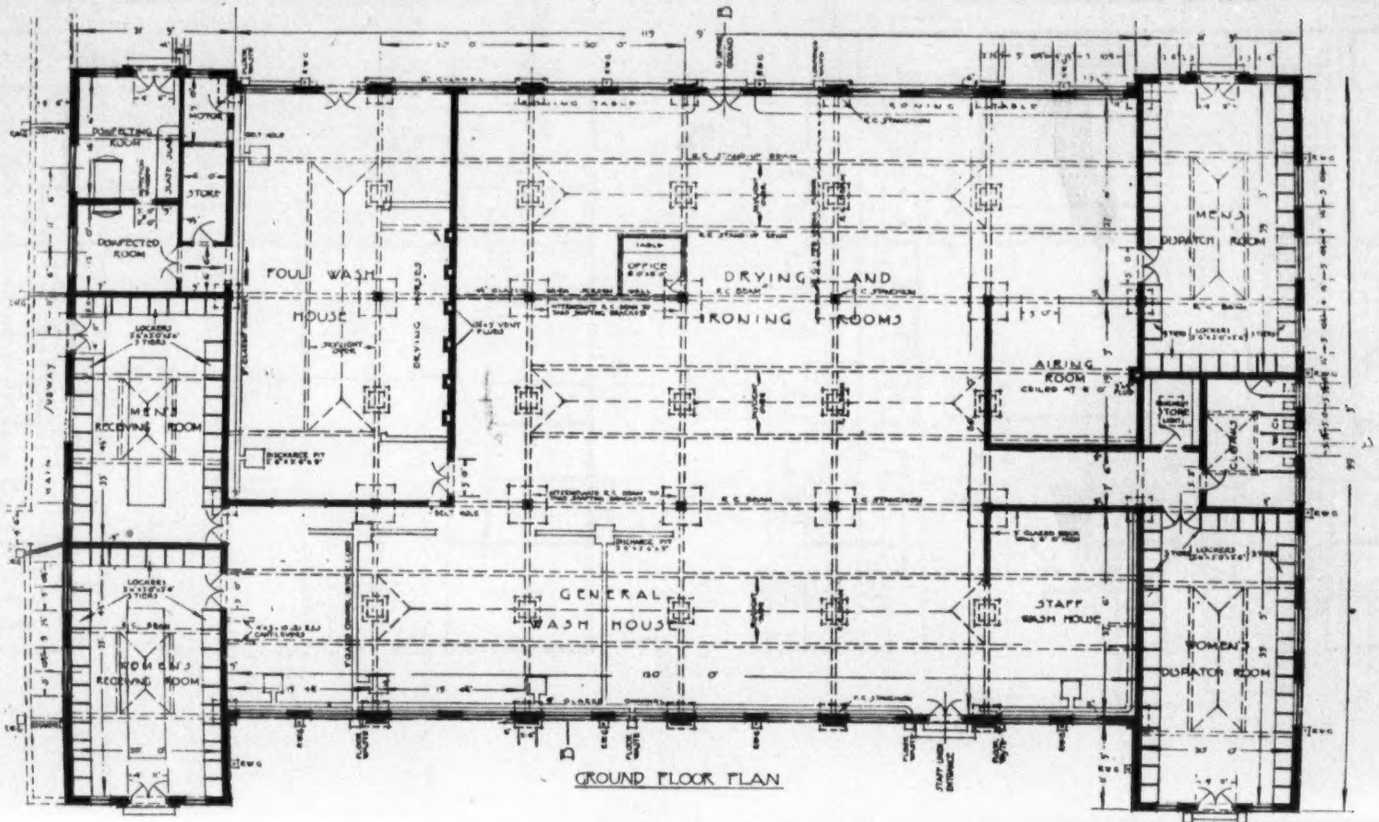
Home for Mental Defectives, Colchester: Kitchen Block.

MR. JNO. STUART, F.R.I.B.A., Essex County Architect.



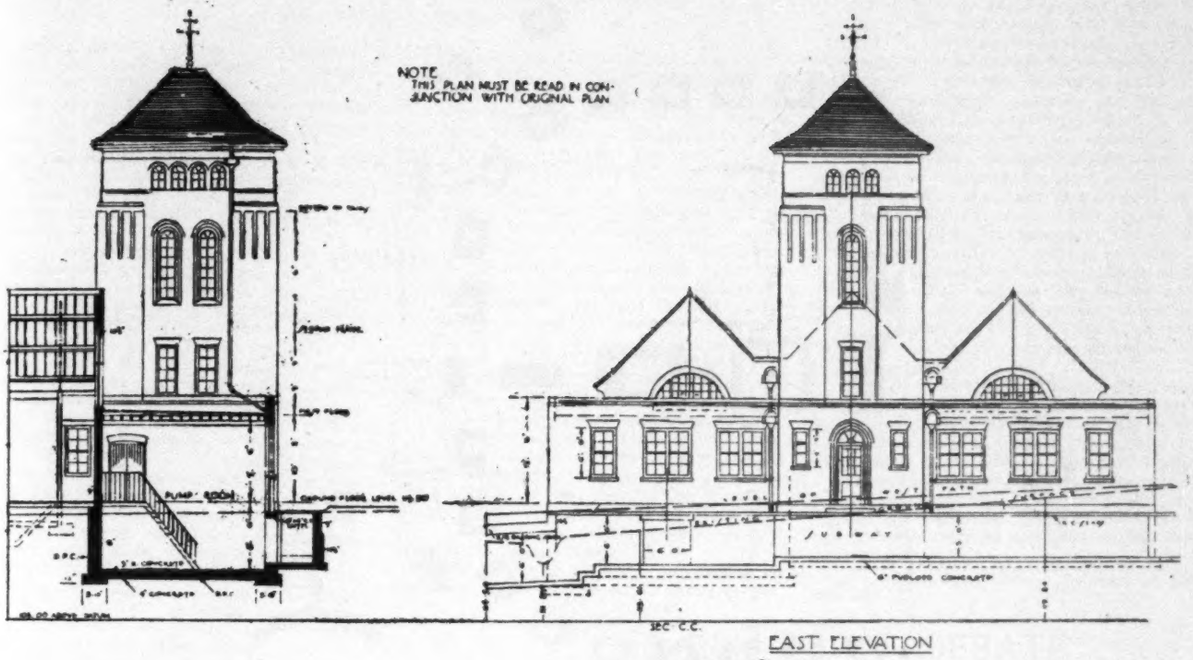
EAST ELEVATION

SECTION A A

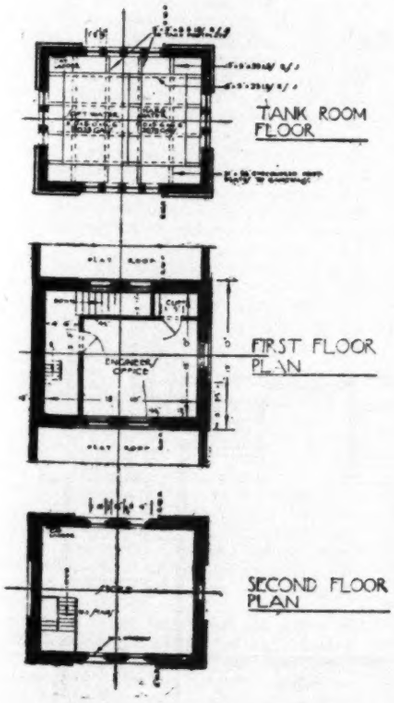


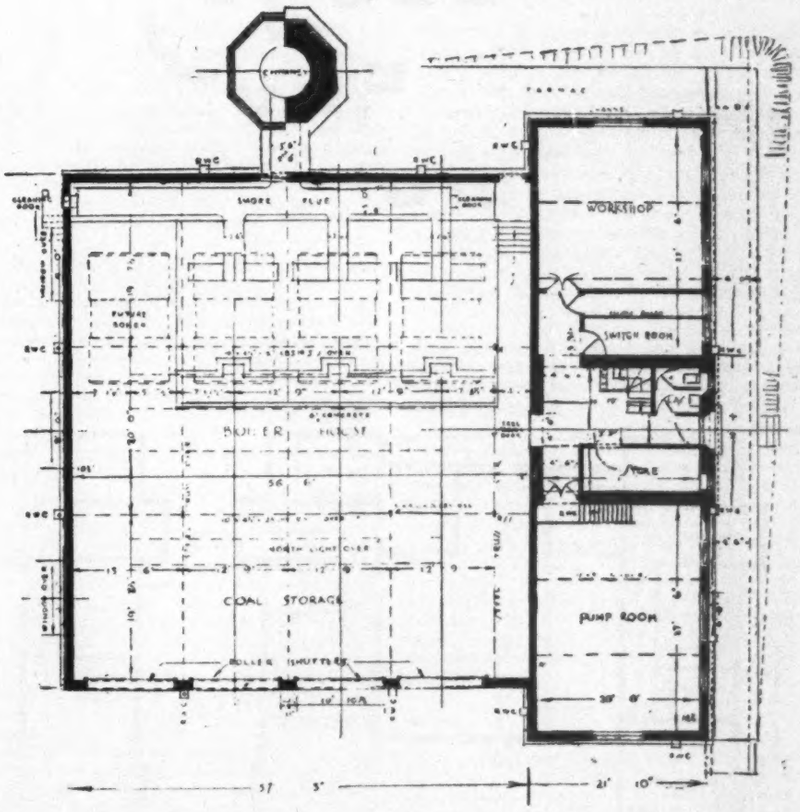
GROUND FLOOR PLAN

Home for Mental Defectives, Colchester: Laundry Block. MR. JNO. STUART, F.R.I.B.A., Essex County Architect.



EAST ELEVATION

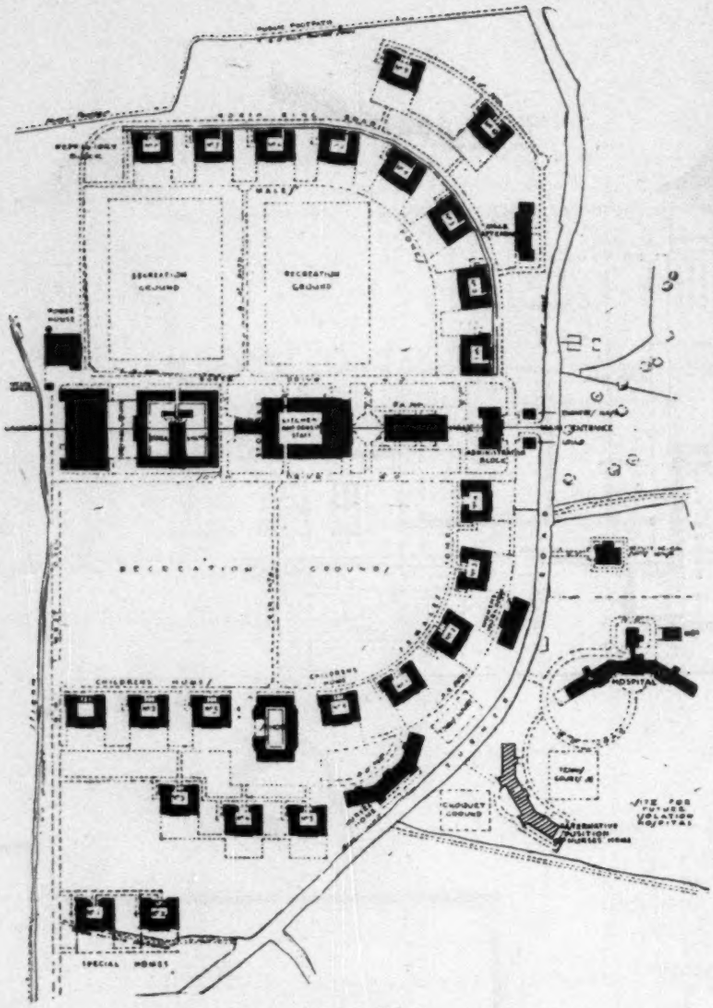




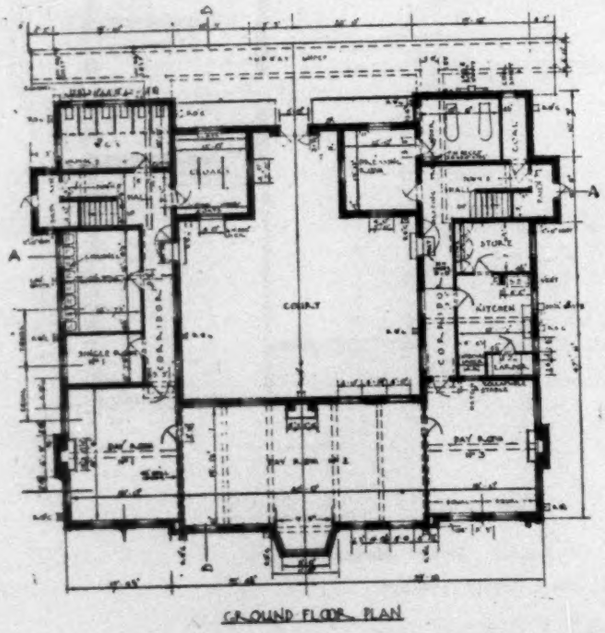
GROUND FLOOR PLAN

Home for Mental Defectives, Colchester: Power House.

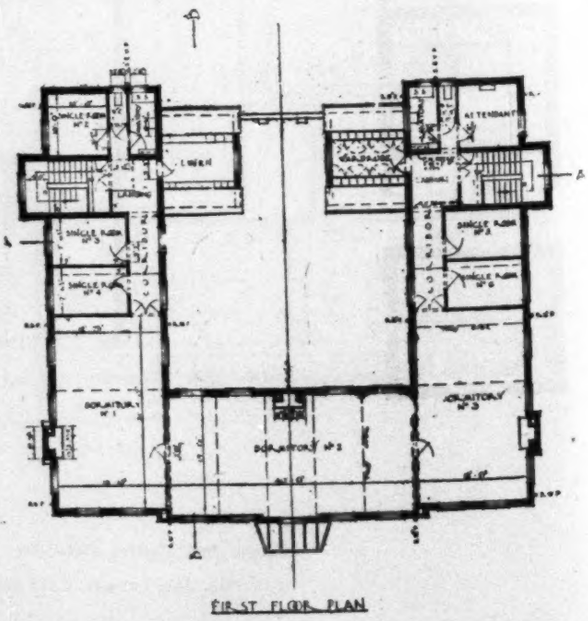
MR. JNO. STUART, F.R.I.B.A., Essex County Architect.



Lay-out Plan.



GROUND FLOOR PLAN



FIRST FLOOR PLAN

Men's Refractory Block.

Home for Mental Defectives, Colchester.

Mr. Jno. Stuart, F.R.I.B.A., Essex County Architect.

THE GREATER LONDON HOUSING CAMPAIGN

ABATEMENT OF OVERCROWDING OUTSIDE THE SLUMS.

By JAMES P. ORR.

In central London the "slums," commonly so-called, have been, or are being, eliminated in the slow course of public improvement schemes or under private redevelopment. The crux of the real London housing problem lies no longer in the "slum," which by its very nature is obvious even to the most casual observer, but in the many thousands of seriously overcrowded rooms which are hidden behind the frontages in apparently decent streets.

This overcrowding outside the slums calls for an *immediate* relief scheme on a far wider scale than even the slum problem itself. All the recent reports of municipal health officers and housing societies show that it is far too serious to be tolerated any longer.

Long before the War displacement of population in the course of redevelopment and improvement schemes had started a rapidly increasing run on rooms in central London, and, consequently, a heavy rise in rents. High rents have compelled poor families to try to manage with one or two rooms, when they really needed three or four.

Young parents, who applied for new homes ten or twelve years ago, have felt the need of extra rooms more and more pressing as children have grown up; but, unable to face the extra rent demanded, they have had, perforce, to let their children grow accustomed to indecent occupation and to standards of accommodation which, from a national standpoint, it should be held disgraceful to tolerate.

The poorer classes, *i.e.*, those families who cannot be expected to pay more than 12s. 6d. per week in rent and rates, are the chief sufferers from serious overcrowding outside the slums. They have been clamouring in their thousands for better housing; but the usual reply to their repeated applications to the local authorities is: "You are ineligible for our houses, because you cannot afford our rents. Wait till those who *can* afford them have been provided for. Your turn will come, when the cost of building is lower and money cheaper, so that we can reduce our rents." And now that cost of building and rate of interest have reached their lowest level since the War, these people are under the new housing policy to be told: "Wait till private enterprise provides you with the houses you need at rents which you can afford"; and this they will, with bitterness in their hearts, interpret as meaning "Do without!"

Meanwhile the practice of sub-dividing houses continues, and is being extended to new quarters; and with it comes increase of overcrowding, especially among the poorer classes. The constant aggravation of the London housing problem resulting from this cause has long been calling for the immediate attention of the local authorities; but the subsidised flats let at 12s. 6d. or less per week are, in central London, still a mere handful, and are by no means always let to the poorer classes, even when the landlords are housing societies.

It is surely high time that the policy of granting priority for relief from bad housing to families with the longest purses should be dropped for good. Priority should be granted to the families in greatest need of such relief, whether rich or poor. Each should, as under the procedure for rehousing prescribed in the 1930 Housing Act, be provided with a suitable home of good standard:—rooms according to its needs; rent according to its means.

In view of the paucity of cleared building sites in London, the few municipal houses for which there are still sites available should be used, not for the accommodation of just any who need new homes, nor even for all who need them urgently, but for those few who need them most.

To ensure that the worst cases are treated first, the criterion of urgency should be pitched so high that the number of families scheduled for priority shall be only three or four times the number of houses likely to be available for them in the next twelve months. Even then there will be a tendency to grant priority to the well-to-do, unless public opinion, roused to righteous indignation by the injustice of the prevalent practice of putting the poor off indefinitely, insists that a fixed proportion—it should not be less than one-half—of the available houses shall be definitely reserved for the poorer classes.

Unquestionably, the local authorities are the proper agency for scheduling urgent cases, settling the order of priority and providing the required houses; but, the Wheatley subsidy having been abolished, all that the authorities who are unwilling to undertake housing without subsidy can do towards abatement of overcrowding outside the slums is to see that all the Wheatley houses which are yet to be completed, or may hereafter fall vacant, are strictly reserved for urgent cases.

Further, to bring as many as possible of these few houses within reach of the poorer classes, it is essential that the local authorities should adopt the family rebate system,* by which the lowest rent possible under normal methods of assessing rents can be brought down by from 2s. 6d. to 5s. per week.

Public opinion ought to cry down that bogey, "The rates cannot bear any further burden." The Hampstead Borough Council have set a good example by embarking on a scheme which provides 296 homes at low rents without Exchequer subsidy, and yet at a cost of only 1¼d. poundage added to the rates. Is it too much to expect of the L.C.C. that they should forthwith take up the work of rehousing the most overcrowded families outside the slums and carry it on at a regular rate of, say, 2,000 houses per annum, appealing, if necessary, for an Exchequer grant, when they have had time to learn by experience whether, in spite of the economies which can be effected by adoption of the family rebate system, the annual burden entailed by this good work is greater than the citizens of London should be expected to bear?

Surely it is worth some sacrifice to escape the reproach, which must otherwise be borne by the housing administrators of this generation, that for over fourteen years after the War many thousands of families suffering from the worst types of housing were refused relief therefrom under the numerous Acts devised for the better housing of the working classes, merely on the ground that they were poor.

*See article in *The Builder* of December 16, 1932, page 1026.

"THE BUILDER" DEBATE

LX.—THE HEIGHT OF ROOMS.

Sir,—"Negative" says, in effect, that my faith is that of the schoolboy, which has been defined as an ability to believe in that which one knows to be untrue. You, Sir, will doubtless rate his perspicacity at what it is worth. He would "fault" me for wishing to see small houses first planned in perspective; but is not that just what will need to be done (and all that will need to be done) to meet the requirements of the panels of taste?

His practical objections must be considered seriously, for it is necessary to get the facts into true perspective, if not the drawings. Beginning with his fear of draughts, it is necessary to take average conditions as the basis of discussion, and when this is done we shall find that the extract ventilator of the room in a small house is the fireplace, and the inlets the door and the window, though on occasion the lines of air travel will be reversed, and the door and window openings become outlets. In either event, if we wished to depict these movements, we should draw lines from the top and bottom of each opening to the top and bottom of each other opening. Outside these lines we should find the sheltered portions of the room and the real reason why the smoke from "Negative's" pipe hangs about near the ceiling. These spaces remain unscavenged. In passing, I would also remind "Negative" that it is against the rules to admit anything in these debates, and consequently, though I shall know full well that I have either convinced or convicted him, I shall not ask him to admit it. In a smoking compartment of a railway carriage that is not so overcrowded as to be beyond the capacity of the ventilators, smoke does not hang about above the luggage racks, for the space above them is scavenged without setting up a draught. When such a compartment becomes stuffy, it is for want of intelligence in regard to the manipulation of the ventilators. The trouble with small rooms in small houses is that so few of us take an intelligent interest in the ventilation of them, and many regard ventilation as being synonymous with draught.

"Negative" wishes to prove his case by quoting figures, but, as to neither his a nor his x has he given a definite value, his deduction lacks weight. Let us see if we can give x a value founded on his further statements. He tells us that his smoke pall will descend upon us at least half an hour earlier in a 7 ft. 6 in. room than in an 8 ft. room, and, if we accept that, we need not be very much alarmed at his $(a - x)$ minutes. Without data as to size of room and number of occupants, it cannot be stated with any accuracy how many times the air in it should be changed in a given time. If, however, we assume that the air in an 8 ft. room should be changed once in 16 minutes (this conforms fairly closely to average requirements), then at 7 ft. 6 in. the change should take place in 15 minutes (the floor area remaining constant). There is nothing to be alarmed at in that. When sleeping, we require less air, for we breathe less rapidly.

I trust that "Negative" will long continue to have clients to whom it is safe to say that he despises £30 because it merely represents 6½d. per week. But surely he is not in earnest when he tells us that these opulent people will accept from him staircases having a width of 2 ft. 9 in. and a tread of but 8 in.! Even so, let him consider it as one winder the less, and then the relief of it! With only £20 more to spend on the staircase, half the difficulties of designing small houses would vanish; and with £10 more for better-fitting windows, the draught and rattle also.

Positive.

Cruise-Tour to Southern Spain.

The Association of Architects, Surveyors and Technical Assistants has arranged a cruise-tour to Gibraltar and Southern Spain from August 25 to September 8. The party will leave London by the s.s. "Maloja," arriving at Gibraltar on August 29, motoring along the Atlantic seaboard to Cadiz, thence to Seville (one day's stay), Cordoba (half-day), Granada (for the Alhambra, one day), and Malaga—*i.e.*, through the Sierra Nevada district, and thence along the Mediterranean seaboard back to Gibraltar, a total of 570 miles' drive. Further particulars will be sent on application to the Secretary, A.A.S.T.A., 26, Buckingham Gate, S.W.1.

ANCIENT MONUMENTS AND THE OFFICE OF WORKS

In connection with the award of the Royal Gold Medal to Sir Charles Reed Peers, a collection of photographs illustrating some of the work carried out by the Department of Ancient Monuments and Historic Buildings under the direction of Sir Charles is on exhibition in the R.I.B.A. meeting-room, and will remain open daily between the hours of 10 a.m. and 8 p.m. (Saturday 10 a.m. to 5 p.m.) until Wednesday, April 12, inclusive.

The following notes on the work of his Department have been supplied by Sir Charles Peers :—

When the results of the work of the last twenty-three years are tabulated, it will appear that, in spite of the blank years of the War, there is a good deal to show. Most of the record is naturally concerned with mediæval buildings, for the maintenance of which the Department of Ancient Monuments is expressly organized. Prehistoric monuments need to be safeguarded equally with the rest, but it is obvious that anything in the nature of repair must in their case be most strictly limited. Only in the case of Stonehenge has any serious constructional work been found essential, and in that instance the insecurity of some of the standing stones made a careful reinstatement essential. Archæology must always go hand in hand with repair in the treatment of all monuments, but in no class of monument is this more imperative than in the prehistoric category. So that careful excavation, under skilled archæological supervision, formed an integral part of the programme carried out at Stonehenge, and what of modern material has, perforce, been introduced is below the turf and invisible to modern eyes. In the same way the building up with turf of the great chalk ramparts of Maiden Castle in Dorset strikes no discordant note, while being a most essential preventive against serious collapse of the early Iron Age defences. The brochs of Scotland, being built without mortar, equally demand "invisible" repair, and their most perfect surviving representative, Mousa Broch, in Shetland, has been taken in hand successfully, and stands some 40 ft. high, with every prospect of long continuance.

Such monuments as these have a definite appeal to the imagination of many, but principally, no doubt, to the archæologist, and the effect on public opinion of the Ancient Monuments Acts must always depend principally on what is to be seen up and down the country in our castles and monasteries. In the vast majority of cases their record for the past four centuries or so has been one of continuous neglect, if not of active spoliation. It will now appear that what in many cases had seemed an almost total loss has proved to be not so. The recovery and demonstration of its plan adds enormous significance to an abandoned building, and, though it can never recall it to life, it can show to all and sundry what that life has been. In the monasteries, where the general arrangement of buildings follows a recognised scheme, it is not hard to make what is left intelligible, and, more than that, attractive even to the unskilled. Where much still remains, the task is simpler, and while, as always, the machinery of repair, even reinstatement, must remain unobtrusive, the cumulative effect of a great ruined church and cloister, still retaining a goodly measure of its architectural beauty, and set reverently in a simple setting of grass lawns, can hardly fail of its appeal. The list of one category only, Cistercian houses, is already a long one. Basingwerk, Buildwas, Byland, Dundrennan, Furness, Netley, Melrose, Rievaulx, Roche, Sweetheart, and Tintern may all now be set to the credit of the State, and there are as many of other Orders. The more spectacular are such as Castle Acre, Jedburgh, Dunfermline, Dryburgh, Kelso, Whitby, St. Andrew's, and Arbroath, while of lesser houses there are Crossraguel, Inchcolm, Inchmahome, Restenneth, Muchelney, and so forth. An impressive demonstration of the wealth of our national inheritance, though a mere handful in comparison with what has been lost. It must be our consolation that in our own times the work of preservation has developed in earnest.

It will readily be realised that even in these days the will to preserve is greater than the power. Monuments exposed to rain and frost, wind and sun, will crumble in spite of all that modern science can do, and not all that is now carefully maintained will survive indefinitely, or even for a long time. Doubtless more efficient methods will be devised in time, but at the present it can only be said that the knowledge of what we are still losing must act as an incentive to greater efforts. Our secular buildings, especially the military, are often better fitted to resist decay. What has been left of Roman fortresses will demonstrate that the building skill of that nation of engineers has left us memorials which are as nearly indestructible as any of man's works. The coast fortresses of Richborough, Portchester, and Pevensey, now under the guardianship of the State, retain in great part their third- or fourth-century walls and towers, yielding where they have yielded rather to man than to nature. In the same way the Norman keeps of London, Richmond, Dover, and Portchester, and the Edwardian Castles of Beaumaris, Caernarvon, Denbigh, and Harlech, are built with an excellence of material which bears comparison with anything of later days, and one may even say that their ruined strength has a beauty of which their builders would have taken little account. Many of these, and more which it would be wearisome to mention, may now become objects of pilgrimage to the traveller in Britain, and they are to be found not only in the easily accessible districts. In the Orkneys, Shetlands, and Hebrides, the State has monuments now carefully guarded—monuments whose remote surroundings form a perfect setting to their simple character, and give them an almost equivalent value to the greater buildings with which Britain is still so well provided. Scotland can boast such treasures as Tantallon, Threave, Stirling, Edinburgh, Huntly, Crichton, Elcho, Linlithgow, to set beside Carisbrooke, Framlingham, Helmsley, Pickering, White Castle, Goodrich, Brough, Brougham, and Kidwelly. All are now maintained by the State, and, as years go on, their number will increase and still further justify those who just fifty years ago first set legislation for the protection of Ancient Monuments in the Statute Book.

CARLTON HOUSE TERRACE

Sir Arthur Steel-Maitland, chairman of the Carlton House-terrace Defence Committee, in his first report to the 400 members of the committee, begins by admitting that the immediate object has not been attained: in spite of strong representations to the Minister of Agriculture and Fisheries and a debate in the House of Commons, the Minister has definitely refused to intervene, and the new building in Carlton-gardens is to be pushed ahead to its full height.

"From the general point of view," the report continues, "a good deal has been gained, however. The Government has openly admitted that the erection of the building was a lamentable mistake. For the time being, further disfigurement of Carlton House-terrace (which otherwise might have taken place), has been prevented. The Government has proposed to take two administrative steps which, it is suggested, will minimise the likelihood of other mistakes of a similar character. These steps are the appointment of an Advisory Committee to the Commissioners of Crown Lands, and the subordination of the Permanent Commissioner to the Parliamentary Commissioner, who will still be the Minister of Agriculture.

A NATIONAL HOUSING BOARD

From a Correspondent.

Many persons interested in building and housing listened in to Sir Raymond Unwin's recent broadcast on the subject of a National Housing Board. Opinion in Whitehall and elsewhere is crystallising on the subject. It is thought that a National Housing Board might carry out one or all of the following functions :—

(1) It might build new houses; but in that case, if conducted on the ambitious scale that has been discussed, a board would mean the partial nationalisation of the building industry. The proposal, for example, to buy materials wholesale suggests a revival of the Directorate of Building Materials Supply, which completely failed to keep prices down directly after the War, and proved an expensive luxury from the taxpayers' point of view.

(2) It might buy over old or new property, and become a property owner. In that case the Board would be in direct competition, as a landlord, with the other landlords in this country, both municipal and private. How far a Public Utility Society would necessarily be a better property owner than existing owners, like Lord Salisbury, who trusts to experienced agents; or than the Ecclesiastical Commissioners, who are guided by expert surveyors; or municipalities, who have created their trained staffs to manage their housing estates, is a debatable matter.

(3) It might be a financing organisation for lending money, which they have borrowed at low rates of interest, should a State guarantee be provided, to smaller Public Utility Societies or to local authorities. The Treasury and the Public Works Loan Board are not likely to look with a kindly eye upon such a competing financial agency. Nor will it be easy for a National Housing Corporation to obtain the backing of the City magnates who are used as advisers by the Treasury. In spite of the admitted shortcomings of the Public Works Loan Board, it may be asked whether a semi-private corporation will be any improvement.

(4) It might supervise and co-ordinate housing activities. But the Housing Department of the Ministry of Health, the Housing and Health Committees of County Councils and other local authorities, and regional and local town-planning committees, have at the present time definite functions laid down by Acts of Parliament. They are probably not fulfilling these functions perfectly; but is there any reason to suppose that a corporation formed of enthusiasts would be able to supervise any more efficiently?

(5) It might try to fulfil all these different duties at once. Sir Raymond Unwin has already stated publicly that he thinks the corporation should build, buy, own, and manage property. In his broadcast speech he made much of the value of the Octavia Hill system of women management.

Those who have analysed, as above, the possible duties of a Board, and who optimistically assume that the Government is prepared to provide an indirect subsidy in the form of a guarantee, take the view that even to fulfil one of these functions will entail wasteful competition with the existing organisations. The idea of a board, which would attempt to carry out all the functions at the same time, does not meet with support in present circumstances.

It was significant that in the broadcast talk given by Sir Hilton Young, the Minister of Health, on Monday, March 27, there was no mention of a National Housing Corporation. On the contrary, Sir Hilton Young emphasised the fact that there are two "great forces" for housing in this country, the Housing Department of the Ministry of Health, and the housing committees and officers of the local authorities, and he urged that these should co-operate in every possible way. But there was not a word about the National Housing Board.

SOCIETIES AND INSTITUTIONS

R.I.B.A.

Following are notes from the minutes of the Council meeting held on March 6 :—

Mr. W. Curtis Green, R.A.—The President, on behalf of the Council, congratulated Mr. Curtis Green on his election to the rank of Royal Academician.

International Architectural Competitions.—A letter was submitted from the Foreign Office stating that the proposal for the establishment of a Permanent International Commission of Architects had been put forward by the United Kingdom Delegation to the Council of the League of Nations and that it had been referred by the League Council to the International Organisation for Intellectual Co-operation.

The New R.I.B.A. Building.—On the recommendation of the New Building Committee the Council unanimously approved the architect's revised design. The lowest tender for the steelwork, of £10,585, received from Messrs. Matthew T. Shaw & Co., Ltd., was accepted.

The Court of Governors of the University of Liverpool.—Mr. E. Bertram Kirby, O.B.E. (F.), was appointed to represent the R.I.B.A. on the Court of Governors of the University of Liverpool for the period January 1, 1933, to December 31, 1935.

R.I.B.A. Architecture Medals.—Mr. J. B. Surman (F.) was appointed as the R.I.B.A. representative on the jury for the award of the R.I.B.A. Architecture Medal in the area of the Leicester and Leicestershire Society of Architects.

System of Colours for Conduits in Buildings.—Mr. L. W. Thornton White (A.) was appointed to represent the R.I.B.A. on a Technical Committee set up by the British Standards Institution to draw up a Standard System of Colours for Conduits in Buildings.

Constitution of the Architects' Registration Council.—The following members were appointed to serve on the Registration Council for the year ending March, 1934 :—Messrs. W. H. Ansell (F.), Henry V. Ashley (F.), Major Harry Barnes (F.), Henry M. Fletcher (F.), E. Stanley Hall (F.), Sydney Kitson (F.), A. H. Moberly (F.), L. Sylvester Sullivan (F.), J. Alan Slater (F.), Sydney Tatchell (F.), Percy Thomas (F.), John Watson (F.), Charles Woodward (A.).

Admission Committee of the Architects' Registration Council.—The following members were appointed to serve on the Admission Committee for the year ending March, 1934 :—Edwin Gunn (A.), A. H. Moberly (F.), Thos. E. Scott (F.), Charles Woodward (A.).

Gift of Chambers Letters.—The cordial thanks of the Council were expressed to Mr. Sydney Kitson for his valuable gift to the R.I.B.A. collection.

Aerodromes Committee.—A grant of £25 was made towards the cost of the work of the Aerodromes Committee.

Fellowship.—The Council, by a unanimous vote, elected the following architect to the Fellowship under the powers defined in the Supplemental Charter of 1925 :—Mr. J. Arthur Smith (L.) (President of the Inverness Architectural Association).

Transfer to the Retired Members' Class.—The following member was transferred to the Retired Members' Class :—As Retired Fellow, William Vallance Betts.

Resignations.—The following resignations were accepted with regret :—Horace Field (F.), Gerald Edgar Jones (F.), George Victor Lidbury (A.), Robert Primrose Morris (A.), Arthur Smethurst Chadwick (L.), Robert Coutts Henderson (L.), William James Joynes (L.), Edwin Rothwell (L.), Ernest Robert Walker (L.).

Election of Students.—The following Probationers were elected as Students of the R.I.B.A. :—

A. F. G. Barnard (A.A.), C. P. Beauchamp (Univ. of Cambridge), C. R. Beecroft (R.W.A., Bristol), G. A. Bethell (Nottingham Sch. of Arch.), J. A. Browning (Glasgow Sch. of Arch.), H. H. Castle (Leeds Coll. of Art), W. Collyer (Edinburgh Coll. of Art), J. F. Coull (Edinburgh Coll. of Art), C. McV. Crichton (Univ. of Cambridge), R. C. Davis (Leeds Coll. of Art), G. Davy (Leeds Coll. of Art), J. F. Donaldson (Edinburgh Coll. of Art), J. W. L. Forge (Polytechnic, London), R. P. Hamlin (A.A.), M. Hayton (Armstrong Coll., Newcastle), W. G. Henderson (Robert Gordon's Colls., Aberdeen), Williamina K. Homan (A.A.), G. W. Johnston (Auckland Univ. Coll.), A. E. McKenna (Polytechnic, London), R. D. Morgan (Auckland Univ. Coll.), Rosa H. I. Morrison (Edinburgh Coll. of Art), T. C. Page (A.A), S. G. Roberts (Welsh Sch. of Arch.), F. M. Rutter (Polytechnic, London), R. S. Shapley (Leeds Coll. of Art), Eileen M. Sherwell (Edinburgh Coll. of Art), A. J. Smith (Glasgow Sch. of Arch.), Carmen S. G. Smith (Polytechnic, London), H. B. Thompson (Armstrong Coll., Newcastle), M. E. Thornely (A.A.), Elizabeth M. Ward (A.A.), H. F. Wilson (Polytechnic, London), W. Wilson (Edinburgh Coll. of Art).

Foreign Postage Rates.

Members of the R.I.B.A. in foreign countries (particularly those resident in Shanghai) have drawn attention to the inconvenience and expense they are continually caused through correspondence and trade catalogues despatched to them being insufficiently stamped. Manufacturers and others circularising members of the Institute are requested to draw the attention of their despatch departments to the necessity for observing the postal regulations and the payment of adequate postage rates.

DEVON AND CORNWALL ARCHITECTURAL SOCIETY.

The annual meeting of this Society was held on Saturday, March 25, at the New London Hotel, Exeter. The president, Mr. A. H. Ough, F.R.I.B.A., was in the chair, and the large number of members present included :—

Exeter Branch :—Messrs. J. C. C. Bruce, A.R.I.B.A., R. M. Challice, E. Kemys-Jenkin, F.R.I.B.A., H. Alban Peters, A.R.I.B.A., H. F. Rea, A.R.I.B.A., H. E. Robertson, L.R.I.B.A., H. S. Scoles, L.R.I.B.A., W. J. M. Thomasson, A.R.I.B.A., L. F. Tonar, L.R.I.B.A., E. L. R. Vining, F.S.I., D. W. Cooper, A. Palfrey, P.A.S.I., O. Parker, P.A.S.I., L. G. North, P. E. Titley and J. Challice, A.R.I.B.A., hon. secretary.

Plymouth Branch :—Messrs. E. J. Catchpole, A.R.I.B.A., C. Lloyd Jones, L.R.I.B.A., H. S. Haughton, L.R.I.B.A., A. C. Norman, F.R.I.B.A., A. S. Parker, F.R.I.B.A., H. Victor Prigg, A.M.I.C.E., B. Priestley Shires, F.R.I.B.A., A. T. Martindale, L.R.I.B.A., Miss K. I. Maynard, D. G. Collins, J. T. Lewis, J. H. Serpell and E. Woods.

The President welcomed members and expressed appreciation that they had attended in such large numbers. The annual report and balance-sheet were presented and unanimously adopted. Commenting on the report, the President made special reference to the resignation of the hon. treasurer, Mr. S. Dobell, after twenty-six years' service. It had been decided to make a presentation to Mr. Dobell very shortly, and, meanwhile, a letter of appreciation of his valued services had been sent to him.

Mr. Ough then delivered his address as retiring president, in the course of which he said that architects numbered between 17,000 and 18,000 souls, all ready and willing to work, but in the present hard times finding it increasingly difficult to obtain employment. What was to be done? How were the numerous young architects coming along to be enabled to earn a livelihood? Their first duty was to register even though they did not approve of the Act. They might not be satisfied with the Act, but if they supported the R.I.B.A., by registering, the Institute would be able to improve it in future Amending Acts, consolidating the position of the younger generation. He hoped to see the time when it would be illegal to erect any building above the value of £100 in this country without employing a registered architect to design and supervise the work; this had been the case in the Colony of Hong Kong for the past thirty years; there the Government authorised properly qualified men, and only passed plans that were signed by them.

He would recommend single qualified men of 25 years of age seriously to consider going abroad; there were opportunities in our Colonies which offered far better prospects than were likely to occur at home. He spoke from experience, but would warn them that it was necessary to be thoroughly trained before going, and to exercise reasonable care for their health when they got there. An engineering qualification was a valuable asset, for sites had to be formed in all sorts of ground, involving heavy cutting and retaining walls, piled and raft foundations and problems of drainage, transport and water supply.

Those members of the profession who had not the opportunity to emigrate, or from family ties or choice remained to practise in this country, were handicapped by the embargo upon advertising. Section 17 of the Architects' Registration Act provided that a body corporate firm or partnership (such as a co-operative society) might carry on business under the style of Registered Architect

> "if in every premises where such business is carried on it is conducted by a Superintendent who is a registered person, or an assistant who is a registered person."

Such bodies were able to advertise to any extent to the detriment of the private practitioner, who must seek other means of approaching the public. As an individual he could do little beyond signing his buildings, in letters not exceeding two inches in height, but the R.I.B.A. did help the profession as a whole by publishing notices of its activities, and might help still more by periodical advertisements setting forth the value of the qualifications it granted, as the Surveyors' Institution, the Incorporated Society of Auctioneers and Land Agents and others did.

A hearty vote of thanks was accorded the President for his services during the year.

The following officers of council were elected for the ensuing year :—

President, Mr. B. Priestley Shires, F.R.I.B.A. (Plymouth); vice-presidents, Messrs. A. S. Parker, F.R.I.B.A. (Plymouth), and W. J. M. Thomasson, A.R.I.B.A. (Exeter); past-president, Mr. A. H. Ough, F.R.I.B.A., M.Inst.C.E. (Dawlish); hon. treasurer, Mr. John Bennett, F.R.I.B.A. (Exeter); hon. auditor, Mr. L. F. Tonar, L.R.I.B.A. (Exeter); hon. secretary, Mr. J. Challice, A.R.I.B.A. (Exeter).

Mr. Priestley Shires then received the badge of office and took the chair. He thanked members for the honour they had paid him and was reminded, he said, of the first step he took in the work of architectural societies many years ago, when he was a member of the Leeds Society. He had been keenly interested in the work all his life, and it would be his pleasure to give his best service to the Society.

Members of Council were elected in accordance with the nominations circulated, as follows :—

FELLOWS.

Exeter Branch : Messrs. R. M. Challice, E. Kemeys-Jenkin, F.R.I.B.A., H. Alban Peters, A.R.I.B.A., J. C. C. Bruce, A.R.I.B.A., H. M. R. Drury, A.R.I.B.A., and H. F. Rea, A.R.I.B.A.

Plymouth Branch : Messrs. W. A. Vercoe, A.R.I.B.A., E. G. Catchpole, A.R.I.B.A., Harold Haughton, L.R.I.B.A., E. V. Channon and C. L. Jones, L.R.I.B.A.

ASSOCIATES.

Exeter Branch : Mr. Arthur Palfrey, P.A.S.I. Plymouth Branch : Miss K. I. Maynard.

SOUTH WALES INSTITUTE OF ARCHITECTS.

CARDIFF (CENTRAL) BRANCH.

The annual general meeting of this Institute was held at Cardiff on March 16. The hon. treasurer's report and balance-sheet, showing the healthy financial condition of the branch, were read and confirmed. The hon. secretary's report was also read and confirmed. It showed that a useful year's work had been carried through, that the lectures and exhibitions arranged had been well attended, and that the tea discussions had been particularly

successful. The report also showed that the School of Architecture Club is doing valuable work for the younger members, its activities including visits to Glastonbury and Wells and to Bristol.

The following officers and members of the executive committee were elected for the coming session :—Chairman, Mr. J. Williamson, A.R.I.B.A.; hon. treasurer, Mr. H. Teather, F.R.I.B.A.; hon. secretary, Mr. W. S. Purchon, M.A., A.R.I.B.A.; executive committee, Mr. H. Norman Edwards, Mr. Gordon Griffiths, A.M.T.P.I., Mr. Ivor Jones, A.R.I.B.A., Mr. T. Alwyn Lloyd, F.R.I.B.A., Mr. Percy Thomas, F.R.I.B.A.; representatives of associates and students : Mr. Trevor Hill, Mr. F. G. Allen.

The following were elected as members of the Council of the South Wales Institute of Architects :—Messrs. Percy Thomas, F.R.I.B.A., H. Norman Edwards, T. Alwyn Lloyd, F.R.I.B.A., Gordon Griffiths, A.M.T.P.I. W. S. Purchon, M.A., A.R.I.B.A., T. Edgar Smith, A. J. Hayes, Lewis John, M.A., A.R.I.B.A., J. A. Hallam, H. Fletcher, C. F. Jones, A.R.I.B.A.; representatives of associates and students, Mr. Trevor Hill, Mr. F. G. Allen.

JUNIOR INSTITUTION OF ENGINEERS.

"The Foundations of Architectural Design."

At the meeting of the Junior Institution of Engineers, a paper with this title was read by Mr. J. R. Leathart, F.R.I.B.A. The lecturer emphasised the fact that modern ism in architecture as exemplified by the work of such men as Mendellsohn, Gropius, Le Corbusier and Mallet-Stevens was concerned with the stark expression of conditions arising from constructional form without striving for that objective æsthetic quality which is the attribute of true architecture in its highest sense. Supporters of the extreme modern school, he said, claimed that the rigid expression of constructional form had within it the essence of beauty, and that there was no need of adventitious adornment of the structure at all; in fact, to be super-consciously truthful was to be beautiful. The lecturer considered such a creed should delight engineers in whose productions the fitness of each part for its purpose was an essential factor. It was an almost invariable paradox that the work of a trained architect tended towards a simple and orderly arrangement of engineering units in decorative treatment, whereas an engineer almost inevitably produced a riotous architectural veneer if left with a free hand.

Having described and differentiated between Greek and Gothic construction, the lecturer said that these two broad constructional principles, existing in multitudinous variety, persisted until a greater revolutionary epoch occurred, namely, the iron or steel skeleton as a load carrier. The vital change in this method of building lay in the transference of the constructional design and control from architect to engineer. Whereas previously an architect had planned and designed the construction and architectural treatment of his building, this comprehensive sphere of activity was curtailed in the larger type of building to planning and architectural treatment only, and so long as steel-framed buildings preserved a semblance of recognised architectural character in the treatment of the envelope walls the architect's function was justified; but with the recent development of what was termed "functionalism," where the structural form was the basis of expression, there were some who contended that as the engineer was responsible for the structural form, it was but a logical corollary that he should also be responsible for the design. Yet a man trained as an architect must inevitably produce work of a higher æsthetic order than one who had not been so trained.

In conclusion, the lecturer recalled the late John Belcher's credo of essentials in architecture. He divided essentials into three categories : Principles, qualities and factors; the principles were truth and beauty. The qualities were strength, vitality, restraint, refinement, repose, grace, breadth and scale; the factors were proportion, light and shade, colour, solids and voids, balance and symmetry.

NEW PUBLIC WORKS

It is not without interest to see that Durham City Council has postponed its "wise spending campaign." The Mayor (Councillor C. Wilkinson) is reported as saying "that it is difficult to forecast what one should do with regard to the question of wise spending when the income tax and rates are high and the heavy industries are in a depressed condition. If the Chancellor of the Exchequer would take his courage in both hands and give relief in these matters, and if the City Council could get the rates reduced sixpence, I think we could go on with this campaign of wise spending." The problem is undoubtedly a difficult one, yet it may be asked whether any municipality or public authority can afford not to carry on with a bold policy of public works. In this connection, the April issue of *Lloyds Bank Monthly Review* is of interest.

"Admittedly," it is stated, "the Chancellor will have a difficult task to balance his Budget, but, as no doubt he realises, the tax revenue of the country depends not only upon the rate of taxation but upon the national income upon which taxation is imposed. If trade and industry dwindle, the revenue accruing to the Exchequer will inevitably shrink, and the maintenance of the present rate of taxation or even the imposition of a higher rate will not arrest that shrinkage or prevent a serious and prolonged Budget deficit. On these grounds it is a matter for the most careful consideration whether it would not be sounder finance to lower the rate of taxation—at the risk, perhaps, of a small immediate deficit—and to rely upon the consequent expansion in the trade of the country to bring with it an expansion next year in revenue as well, such as will restore and ensure the balancing of the Budget." The same suggestion is put forward in *The Times* of March 31. The principle is involved, in short, as to whether budgeting should be confined to immediate monetary questions. Meanwhile, it is encouraging to see that both housing and general building continues on the up grade. Plans for houses approved in February by 146 local authorities, while falling slightly below January's figures, are 25 per cent. above figures for February, 1932. Plans for "other buildings" show a 24 per cent. improvement over January's figures, and no less than 56 per cent. in excess of the figures for February, 1932. Unemployment figures show a definite improvement also. Trade reports are also more satisfactory, and we learn that a record has been broken by one firm of materials suppliers. This is the London Brick Company and Forders, Ltd., who state that the deliveries of "Phorpres" bricks for March were 112,545,590—a record output for any month. The individual figures for the 27th, 28th and 29th of the month—5,300,000, 5,389,255 and 5,000,000—were also record outputs. This is a fact doubly significant, not only as showing the resources of the company, but as a sure index that building work, all over the country, is on the move.

We continue below our list of new public works about to go forward. Other details are given under "Contracts" and "Current and Proposed Building Work" :—

Birkenhead.

Cemetery chapels, crematorium and a waiting-room are to be built by the County Borough at the Landican Cemetery, to plans by Mr. R. W. Johnson, Borough Engineer and Surveyor. Tenders are now being invited, returnable by April 22

Camberwell.

The M.B.C. has decided against extension of the present Town Hall, but has appointed a sub-committee "to consider and submit to the Council suggestions for a site available for a new town hall, together with estimates and plans for the erection thereon of a building which in their opinion would meet all the existing needs of the Council."

Dagenham.

The U.D.C. are seeking Ministry of Health sanction to a loan for a new town hall, baths, and fire station. The present Council House is a mansion 500 years old, and the fire station is a wooden hut roofed with iron.

Great Britain.

Particulars of new building schemes to the value of over £400,000 have been received by the Building Industries National Council from hospitals throughout the country in answer to an inquiry sent out by them. The schemes include : Connaught Hospital, Walthamstow, extension; Devon and Exeter Hospital, new nurses' home; Grimsby Hospital, building scheme, £80,000; King Edward Hospital, Ealing, extension, £7,500; King's College Hospital, London, new nurses' home (about to be started), £15,000, new floor (to be started), £20,000; Paignton Hospital, extension, £3,000; Royal Hospital, Huddersfield, new building in process of erection; Royal Hospital, Leicester, nurses' home, now building, £55,000; Royal Hospital, Warrington, new building in process of erection, £10,000.

Hull.

The Corporation has acquired a £70,000 site in Ferensway for the erection of a coach station and garage.

Kingston-on-Thames.

The present Kingston-on-Thames Town Hall, Municipal Offices, and Police Courts are stated to be inadequate for the purpose for which they are used. It has been estimated that during the year 1933-34 it will be necessary to spend the sum of approximately £4,000 on alterations and additions to the existing premises. The Mayor has stated that from his inspection of the premises the Corporation will be compelled shortly to construct new buildings. It has, therefore, been resolved to appoint a sub-committee to investigate the question of the construction of new premises, and to submit a preliminary report thereon.

London, etc.

H.M. Office of Works is inviting tenders for various work. (1) Extension of Ashtead (Surrey) telephone exchange (tenders by April 25); erection of a County Court at Ilford, Essex (tenders by April 26); alterations to Leamington post office (tenders by April 27).

Maidstone.

The Education Committee recommend that a council school be provided on the upper part of the Sandling-road allotments, to accommodate approximately 450 children.

Manchester.

A new report presenting drastic proposals for clearing a large condemned area of the Hulme district of Manchester has been presented to the Corporation. The report indicates a 15 years' programme of demolition involving 30,000 houses, partly on areas to be "cleared" and the rest on areas to be "improved."

Peterborough.

The Corporation's Electricity Department is to undertake the construction and erection of a modern shop-front and also of various shop-fittings at premises in Bridge-street, Peterborough, intended to be used as a showroom for the Electricity Department.

Sandown, I.O.W.

The Ministry of Transport has sanctioned a loan of £26,000 for the construction of a new pavilion on the pier at Sandown, Isle of Wight.

Scunthorpe.

The Urban Council has accepted a tender to build 50 houses on the Crosby Housing Estate for £13,806 19s.

Taunton.

The erection of the new County Offices, at Taunton, for the Somerset County Council, is to proceed. Firms wishing to tender are invited to send their names and addresses, accompanied by a deposit of £10 10s., to the architect, Mr. E. Vincent Harris, F.R.I.B.A., 29, St. James's-square, S.W.1, by April 10.

MODERN ARCHITECTURE AND ITS EQUIPMENT

"A MODERN Approach to Architecture and Its Equipment" was the subject taken by Mr. Serge Chermayoff, L.R.I.B.A., who lectured before the West Yorkshire Society of Architects on March 2. Mr. B. R. Gribbon, the president, was in the chair.

The past year, commenced the lecturer, had been so eventful—economically, politically and architecturally—that a great many ideas which then appeared revolutionary were now established as progressive. Had that tremendous change not taken place, the word "modern" would have retained only its modish significance, a millinery tag to be regarded with suspicion by the righteous. The modern approach to building deserved attention for a very particular reason. The fundamental principles were essentially new, inasmuch as those who were in fact modern saw them as contributing a new science of building, parallel to the accumulative progress in biology, physics, psychology, sociology and economics—in fact, the new science of living. The new planning and design of structure was not merely a variation in æsthetic principles following on the discovery of new materials, but the earnest desire of thinking people to change living conditions, in proportion to the immense strides forward made in the last thirty years in medicine, hygiene, education and transport. All things in their time might have been modern. The rest was a matter of position in time. All buildings and things inside buildings were designed in their time to fulfil a function and were appropriate to the existing conditions and each other. We differed to-day inasmuch as we had a greater variety of problems to deal with and means of achieving their solution. As Mr. Aldous Huxley had written: "Tradition is the next best substitute for talent." The modern designer was asked to create to-day things without precedent. It was patently stupid to attempt to copy and adapt where conditions demanded new things—in other words, to be content with compromise. A well-known architect, in protesting against the proposed changes in housing made by Mr. Joseph Emberton, had argued that, as people still ate and slept, the house could remain in plan and appearance what it was. In this he forgot that if his precedessors had been of the same mind, he would have had nothing to guide him but a cave!

While on the question of housing, we had learnt from the Chairman of the Housing Committee of the London County Council that non-parlour accommodation was being provided which was utterly inadequate, and a bath to every three families, accessible from the outside, in order to arrive at a so-called minimum rental, still too large. That seemed, in fact, building new slums for old! In view of the progress in education and hygiene, should not, asked the lecturer, revisions be made in building laws, and economies be effected in planning in constructional methods and materials, which were available, to bring those living conditions up to date? Plans had been put forward which made that possible within the specified cost, if building laws kept pace with science.

Interior Equipment.

Turning to the question of decoration and furnishing, these, said the lecturer, in their true sense, were not in separate compartments which could be dealt with separately from the building proper. On the contrary, they were the last stages in the completion of the whole; they were part and parcel of architecture. The structural revolution had changed the whole of the traditional attitude towards the cost of building and, therefore, towards its equipment. To-day we had large, unbroken expanses of wall, ceiling, window and floor. We had been given greater airiness, spaciousness, lightness, cleanliness and warmth. To-day buildings, and the whole of their equipment, no matter how trivial a portion of the whole the latter might be, had definitely to do a job in the first place, which was their reason for having come into being, and, secondly, if possible, should look pleasant, if not beautiful, in the course of their function. He would submit, for what they were worth, said the lecturer, one or two principles in design.

Successful solutions of all problems are arrived at through the process of solving and not through any pre-conceived idea of what the finished structure should look like.

Fitness of purpose. That is to say, that materials are for a purpose and not for an effect. For example, it is architectural nonsense for buildings in brick to ape concrete in their layout and finish.

Form, texture and colour are *of* a thing and not *on* it.

Buildings and things are like ourselves in that they have bodies and skins. But unlike our self-conscious selves, they require no clothes.

Meaningless decoration, as such, is desecration.

HOUSING

MR. E. MAXWELL FRY, A.R.I.B.A., gave a talk to the Carlisle and Country Women's Luncheon Club on "Housing," at the Crown and Mitre Hotel, Carlisle, on March 27.

It was impossible, began the speaker, to overestimate the importance of housing. The house was the central focus of life. Rent was the biggest single item of family expenditure. There was more house building than any other kind of building—and at this moment there were nearly half a million building operatives out of work mainly because of economy imposed by the Government upon local authorities. The present pause in building marked a crisis in the development of housing. The costs of building had fallen very low, much of the housing for those who could afford to pay 15s. or more in weekly rent was completed, and the moment seemed to have arrived when the cheapest types of houses could be tackled. There was no safeguard, of course, against a rise in prices should we enter upon larger programmes of construction, but circumstances favoured us now. Since the War we had done a great deal to make up the deficiencies in estate housing on the outskirts of towns (by private enterprise, by municipal enterprise, and by public utility organisations), and in rural housing (by private building, by council housing, and by reconditioning), without very much affecting the urban housing section, in which overcrowding was still chronic. We had only carried through the first programme by admitting from the beginning that our national organisation did not allow us to house large sections of the community in decency with any profit to those who build. Before the War, housing was left to private enterprise, with disastrous results to the appearance of the towns. In face of the magnitude of the task the Government of the day resolved to take the responsibilty of seeing that housing was provided at a fit standard of both accommodation and design, and as this could not be done except at a loss, the nation agreed to shoulder the loss rather than be faced with another slum problem in a few years. The principle of subsidy was accepted without question; from thenceforth the nation was morally responsible for a national standard of housing. To explain why we were still saddled with congestion, although a vast programme of housing had been successfully carried out, we had to look closely into facts. Population had continued to rise since the War, more slowly than formerly, but appreciably, none the less. But population was only a word for a complex thing. Family life, for instance, had changed in character. Families had become smaller, and tended to split off earlier into independent units. Again, population moved from one centre to another, as the exodus from the northern regions and from the bankrupt countryside served to show. But the towns, therefore, were still overcrowded for easily explainable reasons; of more importance to us was the marked poverty of great sections of town dwellers. Those we were now to house included the temporarily and the permanently unemployed, including a race of people inured to the worst conditions of housing. Without removing industry we had to house them in the towns, near their work, and in any case their housing had to be done at greatest economy, in order that the standards of accommodation and amenity should not be damaged in the process. If we accepted the problem as one to be solved without reference to any particular style of architecture or other preconception, and resolved that we would set about making all towns fit and enjoyable places to live in, what were our resources? We could say at once that we would not lower standards but raise them. How was this to be achieved?

First, then, to the house itself—the minimum house. What economies could industry provide? New materials such as reinforced concrete, metal windows, cheap glass in large sheets, asphalt, plywood, wallboard, and new methods—standardisation, mass production, organised delivery, guaranteed specification, time-saving machinery. What economies could architects provide? They could throw overboard their ideas about garden cities wherever these spelt waste, and concentrate upon the plans that made use of cheap and good materials with the utmost economy so as to reduce the cost of houses to a figure at which it would pay to build them even with a small rental return; £250 was about the figure to aim at.

What economies could town planning provide? In alliance with the architects it could aim at a closer pattern of housing development, narrower residential streets where heavy traffic was not expected, lay-outs of continuous formations of houses with open spaces concentrated at close intervals for recreation, leisure and allotments working. This it could do, not with any idea of crowding, and at no injurious lowering of the house density, but in order to provide economic lines of drainage and servicing, to reduce fatigue and waste, and to allow architects some hope of arranging the small house units into the semblance of a town that had cohesion, order, and a fine expression of civic identity.

Within the old urban centre, already covered with buildings, difficulties were greater, but not unsurmountable. The worst form of waste was bad housing, and in the long run it could not be cured without town planning; without some scheme for fitting every piece of new housing into a plan for making the town a workable economic machine, and a good place for everybody to live in. Slum clearance was not enough; we must remake the bad old towns.

Proposed Motor Racecourse, Bucks.

A scheme is going forward to establish a motor road racecourse at Ivinghoe, on the Buckinghamshire border, a few miles from Tring. A syndicate, with which Mr. W. H. Nockolds, of the St. Margaret's Construction Co., Ltd., 39, Victoria-street, S.W.1, is connected, proposes to lay out the course, which will have an area of over 400 acres, and to erect a large clubhouse in the centre of the course. Squash rackets courts and swimming pool are to be built. Also proposed is the establishment later of an aerodrome with hangars and engine shops. The architects to the promoters are Mr. John Greaves, F.R.I.B.A., and Mr. H. Sudlow, F.R.I.B.A. (retd.), in association, 28, Albemarle-street, W.1.

MODERN HEATING AND VENTILATING PRACTICE

A PAPER on recent developments in the heating and ventilation of buildings was read by Mr. J. L. Musgrave, Past-President of the Institution of Heating and Ventilating Engineers, before the Royal Society of Arts, on March 8. It was safe to claim, commenced the lecturer, that Great Britain led the world in the development of improvements in heating and ventilating equipment applied to public and office buildings, hotels, theatres, etc., as well as private dwellings, but the application of such apparatus to factories and smaller hotels, older office blocks, and many private houses was still the exception rather than the rule. Wrong ideas about heating arose largely from the casual attention given to the selection and installation of heating apparatus. Modern heating and ventilating was based upon scientific principles, and, given the opportunity and information about a building, the skilled heating engineer could calculate within close limits the exact apparatus required to meet certain specified conditions. That that was not done in all cases was frequently due to the fear of the heating engineer that, having provided in his scheme and estimate for adequate plant to meet the requirements, he would lose the order to a competitor who had offered a smaller and less adequate plant at a lower price. In consequence, where competitive prices were obtained, the purchaser was unlikely to secure the highly efficient apparatus that he would obtain if he took the advice and accepted the price of a well-known and reputable firm which could be thoroughly trusted. The cost of running an unbalanced or inadequate heating apparatus was out of all proportion to any saving in initial cost that might be obtained by accepting the lowest-priced estimate submitted. It was hoped that one day an official Standard Specification of Heating and Ventilating Equipment would be drawn up by the Institution of Heating and Ventilating Engineers, embodying the essential air changes and temperature differences to be provided for under given conditions, as well as the relative proportions of boiler and radiating surface and desirable surface temperatures. Those factors would enable architects and consulting engineers to determine without difficulty the relative values of various schemes.

Modern Methods of Heating.

Developments had taken the form of improvements in the design and methods of construction of convectors, or "radiators," as they are usually, but inaccurately, called. Radiators of the "Classic" or tubular type were exceedingly popular; they were compact, efficient, and presented a neat appearance, and the cost was reasonable. The most effective was the two-column "Classic," an introduction of the last two years. The "Ray-rad" was perhaps the most effective of the transportable type of radiator, as the greater part of the heat transferred was by radiation, particularly when fixed horizontally at ceiling level. When fixed vertically, the diffusion by convection was higher. Insulation in various forms was introduced behind the "Ray-rads" to prevent loss of heat. They could be fixed so that air circulation took place behind the radiator and was a convenient means of introducing air into a room, but provision must be made for cleaning the air inlet and air passages. Another type of indirect heater, useful particularly in factories, was the "Unit" heater. Those were usually hung from roof or ceiling and air was circulated by means of a fan. The greatest departure from orthodox methods of applying radiant heat was the introduction of the system known as "Panel Warming," which was first introduced on a large scale in 1908 in the Royal Liver Building, Liverpool. That was one of the earliest high buildings in this country; it had thirteen floors, and the pressure of 179 ft. was such that normal cast-iron radiators would not withstand the head pressure on the lower floors. That could have been overcome by dividing the system laterally into three separate systems, but such an arrangement would have occupied space which could be more usefully employed. Coils of welded pipe were fixed to the floors and covered with a special flooring composition. That system was working satisfactorily to this day, and no deterioration had taken place in the pipes either inside or out. The latest and most efficient method of employing the "panel" system was to fix the pipes in the ceilings, which were plastered in the normal way, except that plaster of a good quality had to be used. When panels were fixed in concrete floors, electrically welded coils were first laid on the shuttering and the concrete was poured over them, fixing them in position. When they were fixed to wood floors the coils, attached to expanded metal, were screwed to the under side of the joists. Insulating material was placed above the coils and the plaster was applied to the expanded metal in the usual manner, the only difference being that the plaster had to be of a good quality and it was usually reinforced with a canvas scrim. At the Bank of England the panel coils were formed of annealed copper tubes, solid drawn in lengths up to 120 ft. The coils were made *in situ* on the shuttering and cast in the usual manner. That was one of the largest installations of its kind in the world. Warmth was radiated downwards towards the floor as well as obliquely at various angles, and with that system particularly comfortable and healthy conditions could be maintained. Usually the temperature of the water circulating through the system was maintained at from 95 deg. to 100 deg. F., according to the weather, the temperature of the plaster surface being somewhat lower. Practically the whole of the heat diffused was by radiation owing to the horizontal position of the panels, and as radiant heat had not the power to heat the air through which it passes, there was practically no drying effect. The "panel" system had been used in about 40 open-air schools in various parts of England, with advantage to the scholars and the teaching staff. One very successful installation was in a school at Norris Green, Liverpool, which accommodated 800 scholars. It might be of interest to note that the panel system is used for the cooling of buildings by the circulation of cooled water through the panel-warming coils. Thermostatically operated magnetic valves regulated the flow of water through the warming panels or radiators. A thermostat was set at the temperature desired and operated within a variation of + or − 1 deg. F.; that was to say, when the temperature in the room rose 1 deg. above that at which the thermostat was set, an electric contact was closed which operated the valve and shut off the circulation; when the temperature dropped 1 deg. below the set temperature, operation of the thermostat caused the valve to open and the circulation was restored. Another adaptation of the method of thermostatic control was the "Modulator." That apparatus was used to govern the general temperature of a building and was particularly useful where some form of thermal storage was used. Usually in such apparatus the water was too hot for direct circulation throughout the building; the Modulator, controlled by a thermostat, released such proportion of hot water from the storage as was required to make up the heat loss from time to time, an equivalent amount of cooled water being returned to the lower part of the cylinder.

Thermal Storage.

Thermal storage was a term applied to systems where heat was stored in various forms during hours when the generation of energy was cheap or convenient. The method was particularly useful where electrical energy was supplied for a limited period at a cheap rate. At Martin's Bank head office, Liverpool, the boilers were oil-fired. To secure the most efficient results, a building should be heated continuously, but the disadvantage of having a night operating staff in a bank, as well as the expense involved in the employment of three shifts of stokers, rendered it desirable that the actual operation of the boilers should be limited to the day shift. Thermal storage cylinders were attached to the boilers, the storage capacity being sufficient to run for sixteen hours after the boilers were shut down. The additional benefits derived from such an installation were that the oil fuel burners were set to run at a point of maximum efficiency and did not need to be manipulated from time to time to meet a variation of demand, therefore consumption of fuel was reduced to the minimum and smokeless combustion was assured, as the accurate setting of the burners needed no adjustment. The boilers and storage cylinders were efficiently lagged. Tests had shown that the fuel consumption in that building was less than 300 tons per annum, against a calculated consumption uncontrolled of over 500 tons. A smaller installation of oil-fired boilers in conjunction with storage had been installed in a high-class block of flats in London.

Ventilation.

During cold weather, heat losses took place continuously from a building by conduction through exposed walls, roofs, windows and doors, and, to balance those losses and maintain conditions of comfort within the building, heat had to be supplied from some source graduated to balance the heat loss, which varied according to external temperature, direction and velocity of wind, and other conditions. Heated air coming in contact with cold walls and windows quickly gave up its surplus heat, and, unless that was adequate to balance the heat losses, the over-cooling of the air created a down-draught, causing serious discomfort to the occupants of that part of the room. At the same time, the parts of the room which were not adjacent to the external walls were overheated, unless some arrangement was made for air at lower temperatures to be admitted to the centre part of the room, and higher temperatures to the external parts—a matter of some difficulty. To prevent the incoming heated air from escaping before the transmission of heat to make up for the heat losses, the extract outlets were placed near the floor, the impurities from human breath, smoke, etc., rose to the upper part of the room and were trapped there until they collected in sufficient strength to contaminate the incoming fresh air. By increasing the air change considerably, sufficient air movement could be maintained to carry down to the extracts all offensive products, but that entailed unnecessarily expensive plant which was costly to operate, and the necessary and continuous adjustments required to regulate the temperature and velocity within the fine limits required to cope with continuous variations of external and internal conditions were beyond the capacity of the staff usually provided to supervise the running of apparatus of that character. Modern methods now required the installation of radiators, panels, or other forms of direct heating adjacent to external walls, windows and doors, of sufficient capacity to balance the exposure losses; it was then possible to bring in the incoming air at, or slightly below, room temperature, so that the heat generated by the occupants, the room lighting, etc., and other sources of casual heat were counterbalanced, and healthy conditions were thus maintained.

Discussion.

In the discussion which followed, Professor A. E. Richardson said that he had recently been dealing with seven acres of old building requiring to be warmed, and had found it possible to warm all from one central boiler. If the people concerned would pool their resources, it would be possible to warm all the drapery stores in Oxford-street from a central boiler and this would be a great economy. But in the warming of historical buildings

there were difficulties. The engineer was not allowed to use a radiator, to cut the floor, or disfigure the walls. What was he to do? In the case of an old church, the best thing was to build a brick flue clear of the stonework, whitewash it, and put into it a small anthracite stove. If the fire was lighted on Thursday, the church would be comfortably warm on Saturday night. But for large buildings science was required.

Mr. J. Roger Preston said methods of heating were now in a more fluid state than they had been for some time, but architects as a body must realise that low temperature methods had come to stay.

Mr. Llewellyn B. Atkinson said the best method of heating was to warm the air generally by some system of moderate heating and have in addition radiant stoves where these were required. He had had an interesting experience with regard to ventilation. A firm of which he was a director had been troubled by the mistakes made by its clerks in one department. Careful records of temperature, barometric pressure, etc., showed that crops of mistakes occurred whenever there was a considerable change in the weather: evidently the human organism took a little time to adjust itself to the changed conditions. As a remedy, ventilating arrangements were made that changed the air in the office thrice per hour, and the average of mistakes went down by half.

BRITISH ART IN INDUSTRY

At a time when it is a matter of national urgency that British Industry should receive every encouragement, the Councils of the Royal Academy of Arts and the Royal Society of Arts have decided to give a definite lead in emphasising the importance of Art in Industry. For this purpose they are arranging to devote the Royal Academy's Winter Exhibition, January-March, 1935, to an Exhibition of Contemporary British Art in Industry. In order to secure effective co-operation with manufacturers, it is proposed that the industrial organisations interested in this undertaking should confer with the Council to form an advisory committee for each section of the Exhibition, to assist in securing adequate participation by suitable industrial concerns, and in making a preliminary selection of works. The aim, more fully explained in a memorandum now issued by the Council from the Royal Academy of Arts, W.1, is briefly to display an impressive collection of the best that British industry can produce, and to arouse thereby a world-wide respect for British designers and manufacturers. As regards the expenses of the Exhibition, it is not proposed to appeal to exhibitors for any financial support, nor will there be any charge for space. Industrial organisations interested in this Exhibition are invited to state whether they will be prepared to take part in the preliminary discussions for the purpose of appointing the advisory committees.

"WHERE LONDONERS PLAY"

A lecture on this subject, the fourth of the series of lectures on "How to Look at London," organised by the R.I.B.A., was delivered at 9, Conduit-street, W., on Wednesday, March 29, by Mr. P. Morton Shand. The lecturer confined himself to a discussion of theatres and cinemas, and spoke of the rather alarming tendencies of London's recent pleasure architecture, which he described as "dangerously unsocial improprieties." In particular, he attacked the vulgarity of cinemas, with their obstructive and inappropriate hoardings outside and their crude "atmospheric" forms of decoration within.

With regard to the actual theatres themselves, the lecturer pointed out that very few people ever really notice the interiors of the theatres they visit, concentrating their attention chiefly on the comfort and position of the seats, the situation and associations of the theatre, and, of course, the "bar." The importance of the bar in modern theatre architecture was emphasised by the lecturer, who, while admitting that they were very much improved and often very charming, condemned on the whole the modern bar architecture as being a decadent form of the "1925 Parisian manner."

The lecturer went on to compare the theatres of to-day with those of yesterday. In actual fact, he said, most of the theatres of London are of a standardised late Victorian or Edwardian type, stereotyped, over-ornate and often ugly but at the same time dignified and appropriate to the theatrical needs of the age. He compared these old-fashioned theatres, despite all their æsthetic and practical drawbacks, very favourably with the auditoriums of most modern theatres to-day, and as almost perfect examples of the Victorian theatres he cited the Comedy Theatre and the Little—one of the few theatres with a really "intimate" atmosphere. The old Empire he regarded as one of the most characteristic monuments of its period, with an almost noble atmosphere impossible to reconcile with its over-gilded modern supplanter, and he commended the Alhambra and the Lyceum for their absolute appropriateness for their purpose. Amongst other old-fashioned theatres described was Drury Lane (which, he said, in spite of looking from the outside like an XVIII century prison, still has the most dignified exterior of any London theatre) and Queen's Hall, whose interior is almost perfect of its kind.

Though he was a firm believer in the principle of the architecture of each age *for* each age, he did not think that we had yet achieved the proper expression of our needs in the theatre architecture of to-day. Practically the only exception to this opinion was the Cambridge Theatre, which, according to the lecturer, gives the necessary feeling of restfulness and avoids the current dangers of "jazz modernism." He commented, however, on the discrepancy between the interior and exterior of this theatre, a discrepancy in period which is also evident in the Duchess Theatre. The lecture was illustrated by lantern slides of old and new theatres in London.

PICTORIAL DESIGN

A lecture on "Some Aspects of Pictorial Design" was given on Monday evening, March 27, by Mr. Hesketh Hubbard, before the Royal Society of British Artists' Club, when the chair was occupied by Mr. Adrian Hill.

The lecturer asked how many painters to-day were trained in architecture? If there were no architecture, he said, it was perhaps no exaggeration to say the palette of the painter would still be restricted to woad, his painting surface to his own skin. So long as painting and architecture were wed, so long was painting a vital thing.

The first question he asked himself about a picture was: "Does it hold its own with the furniture?" To paint a picture that could hold its own with an ordinary kitchen Windsor chair was more difficult than one would suppose. How many easel pictures to-day, when eventually they found a place on a wall, were as permanent there as a mural painting, not because they were so perfect as decoration, but because if they were moved there would be a mark on the wallpaper? The painter needed to be a fair equilibrist. He needed to be able to balance mass with mass, line with line. By changing the emphasis the sense of a design was changed.

We wanted painters who had been through the discipline of an architectural training; who could work to specification. Painting would not be the vital thing it was until it was re-wed to architecture. We wanted painters and decorators rather than people expressing in paint personalities that were not always as interesting as their possessors imagined.

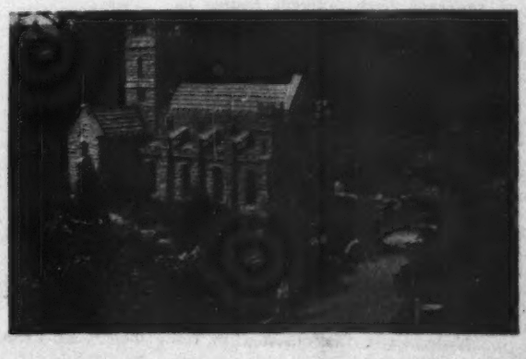
A MODEL VILLAGE

We have received from the Railway Benevolent Institution particulars of a charming model village which has been built at Beaconsfield from the designs of the owner, Mr. Callingham, of Chiltern Lodge, Ledborough-lane, Beaconsfield. It is situated in a beautiful rock garden covering an area of roughly 1,000 sq. yds., and consists of a village, with church, shops, hotel and other public buildings, 1,200 ft. of railway line with five stations complete with rolling-stock and other accessories, fields, water-courses and woods.

The railway, which is electrically controlled, has three main platforms at the terminus, double lines of rails passing along deep cuttings spanned by bridges, and an intricate system of points and electric signalling. Its engines and rolling-stock are of the most modern type. It is, in fact, a reproduction to the minutest detail of the modern railway system.

The village is electrically lit, and in the evening forms a charming picture with its illuminated streets and buildings. The buildings are of brick, stone and timber. In the fields cattle graze and the whole pastoral setting is typical of the unspoiled countryside.

The village is open to public inspection every Sunday, and the proceeds are given to charities in which the owner is interested.



Views in the Model Village at Beaconsfield.

LAW REPORTS

COURT OF APPEAL.

Before LORDS JUSTICES SCRUTTON, LAWRENCE, and GREER.

DRAIN OR SEWER? IMPORTANT DECISION.

Hill *v.* Aldershot Borough Council.

In this case the litigation was between the executors of the late Mr. W. T. Hill, the owner of three houses in Edward-street, Aldershot, and the Aldershot Corporation to determine the liability for the sum of £73 18s. 1d., as the cost of repairing a drain.

The executors appealed from a judgment of a King's Bench Divisional Court consisting of the Lord Chief Justice and Justices Avory and Macnaghten, holding them liable to pay the sum claimed as their share of the whole cost of repairing the drain in question. By their judgment the Divisional Court affirmed the decision of the Aldershot Justices.

The appellants did not dispute liability for the work done to the point at which the pipes from each of the three houses flowed into a main pipe which carried sewerage from these and other houses, but their contention was that below that point the pipe could not be a single private drain repairable by the owner, but was a sewer repairable by the local authority. The Divisional Court held that the whole pipe taking the sewerage from the 15 houses, 13 to 41, Edward-street, was a single private drain, and that the executors were liable.

At the conclusion of the arguments, Lord Justice Scrutton, in giving judgment, said it was a very difficult and unsatisfactory case which depended on the effect of numerous and contradiotory decisions on the meaning of the Public Health Acts, 1875 and 1890, the question being whether a pipe which conveyed sewerage was a drain repairable by the owners or whether it was a sewer repairable by the local authority. If he (the Lord Justice) had had a free hand he would probably have arrived at a different conclusion from that which he had with some difficulty arrived at. In this particular case a length of pipe had been held repairable by its owners as a private drain under the Act of 1890. By the Act of 1875 once one got drainage of two buildings into a drain it became a sewer, repairable by the local authority. Section 19 of the Act of 1890 made an attempt to deal with the difficulty which arose, and provided that the expression "drain" included a drain used for the drainage of more than one building, though under the Act of 1875 it was a sewer. Mr. Justice Avory, in the Divisional Court, had expressed the view that if into any part of a continuous pipe one got two different owners discharging, the whole of the pipe, though it received in other places drainage from other houses of the same owner, became a private drain. He (the Lord Justice) sympathised with that view, and had he been free would have been glad to adopt it. But after careful consideration he did not think it consistent with the decision of the House of Lords in the case of "Wood Green Urban District Council *v.* Joseph" (1908 appeal cases). He thought the Judges took the view that section 19 did not prevent pipes carrying only sewerage from different houses in the same ownership from being sewers, and that a line composed partly of a sewer under the Act of 1875 and partly of a private drain under the Act of 1890 could not as a whole be a private drain. The result seemed to be that a pipe on private land draining six houses in different ownerships was a single private drain repairable by the owner; but if the owner of No. 6, the house furthest from the public sewer, also owned No. 5, the whole pipe would be a sewer repairable by the local authority. With all respect to the legislature and those who had so decided, that seemed to be an absurd result. The absurdity might be either in the statutes, or if they were ambiguous, in the decisions on their meaning. He regretted that, in his opinion, the appeal must be allowed, and the question in the special case answered by saying that the particular pipe in question was not a single private drain, with the consequence that the claim failed, except in so far as it had been admitted. He regretted the decision because he thought that the consequences of the decision, though in accordance with the Act of Parliament, as interpreted by the High Court, were ridiculous. He was afraid it was hopeless to ask Parliament to deal with the matter by making some intelligible and reasonable provision on the subject. The present legislation, with the conflicting attempts to interpret it, was a disgrace to the English legislature. The appellants must have the costs of the appeal in that Court and in the Court below.

Lords Justices Lawrence and Greer concurred.

KING'S BENCH DIVISIONAL COURT.

JUSTICES ACTON and TALBOT.

APPEAL BY BUILDING CONTRACTORS FROM ARCHITECT'S AWARD.

H. M. Nowell, Ltd. *v.* Corporation of Kingston-upon-Hull.

In this case Messrs. H. M. Nowell, Ltd., builders and contractors, of Bank-chambers, Stockton-on-Tees, appealed from the judgment of Mr. S. R. C. Bosanquet, K.C., the Official Referee in the action which they brought to recover £4,896 in respect of extra work entailed in building for the Kingston-upon Hull Corporation 374 houses up to the level of the roadways. The Corporation refused to pay on the ground that, acting under the contract, their architect had adjudicated upon the question and decided that the work charged for was covered by the contract.

The contractors contended that there had been no valid adjudication, but when the matter came before the Official Referee he decided in favour of the Corporation, and from that decision the contractors now appealed.

Mr. W. T. Creswell appeared for the appellants; and Mr. W. H. Owen for the Corporation.

Mr. Creswell said the grounds of the appeal were that the Referee was wrong in limiting the inquiry to the question whether there had been an adjudication; in refusing to hear certain evidence by the contractors and in holding that there had been an adjudication. The contracts in the case were entered into in 1929 and were lump-sum contracts, and the sums involved were £81,470 for the Inglemire-lane and £55,224 for the Derringbank Farm Estates. The sums now claimed were in respect of having to raise the houses to the levels of the roads made by the Corporation. The contractors regarded this work as extras, but the Corporation alleged that the contracts, being lump-sum contracts, included this work. In some cases the houses had to be raised as much as 5 ft. 6 in. The Corporation also alleged that the work had been done without a written order and that those claims were adjudicated upon by the architect and disallowed. He (Mr. Creswell) contended that there had never been a valid adjudication and that the architect had come to a decision before holding the inquiry.

Without calling upon counsel for the Corporation, the Court dismissed the appeal.

Mr. Justice Acton, in giving judgment, said that the only question before the Official Referee was whether there had been a proper adjudication by the architect, Mr. Harvey. The contract provided that in all questions arising between the Corporation and the contractors the decision of the architect should be final. It was true that a year before, when the work was not complete, Mr. Harvey had expressed the opinion that the extra digging was not outside the contract. When the work was completed the plaintiffs laid the whole matter before Mr. Harvey, who then decided that the plaintiffs were not entitled to any extra payment. The inquiry was one to which no exception could be taken, and seeing that the plaintiffs submitted their case to Mr. Harvey, they could not say that he was not a fit and proper person to hold it. The Official Referee's decision on the matter was perfectly correct, and the appeal failed and would be dismissed with costs.

Mr. Justice Talbot concurred.

COURT OF APPEAL.

The MASTER OF THE ROLLS and LORDS JUSTICES LAWRENCE and ROMER.

APPEAL IN ACTION BY CONSULTING ENGINEERS.

Handcock and Dykes v. London and Home Counties Joint Electricity Authority and the Leatherhead and District Electricity Supply Co., Ltd.

In this case Messrs. Handcock and Dykes, consulting engineers, of Victoria-street, Westminster, applied by way of appeal for a variation of the declaration made in the action which was tried by Mr. Justice Luxmoore in the Chancery Division

The case was reported in *The Builder* of October 28 last year.

The appellants brought the action against the defendants for declarations and ancillary relief under the terms of an agreement made between the appellants and the defendant company, dated March 19, 1928. The company at that time were the undertakers and distributors of electricity and owners of the electricity supply undertaking in Leatherhead, and the defendant authority is a body incorporated under the London and Home Counties Electricity Order, 1925, to whom the electricity undertaking in Leatherhead was transferred on January 1, 1931. The appellant's case was that by the agreement of March 19, 1928, the defendant company agreed to employ them as consulting engineers for a period of 10 years, from January 1, 1928, to December 31, 1937, and thereafter from year to year, the agreement being terminable by one year's written notice on either side.

Clause 2 of the agreement provided that when the company decided to proceed with any extension or reconstruction or conversion of the then existing undertaking the appellants as the engineers were to prepare the plans and specifications, obtain tenders and direct the construction, and Clause 3 provided that the company should each year pay to them for such services 5 per cent. upon the total capital outlay during the year expended on such work, whether carried out completely by contractors or partly by the company's own staff. The appellants alleged that they had acted in that capacity during 1931, and as each of the defendants had failed or refused to render them accounts showing the amount of capital laid out, they brought the present action claiming against both sets of defendants a declaration that upon the true construction of the agreement defendants were liable to pay to them in each year of the currency of the agreement a sum equal to 5 per cent. upon the capital outlay (excluding the cost of land) in connection with the undertaking, and also an account of the capital outlay during 1931.

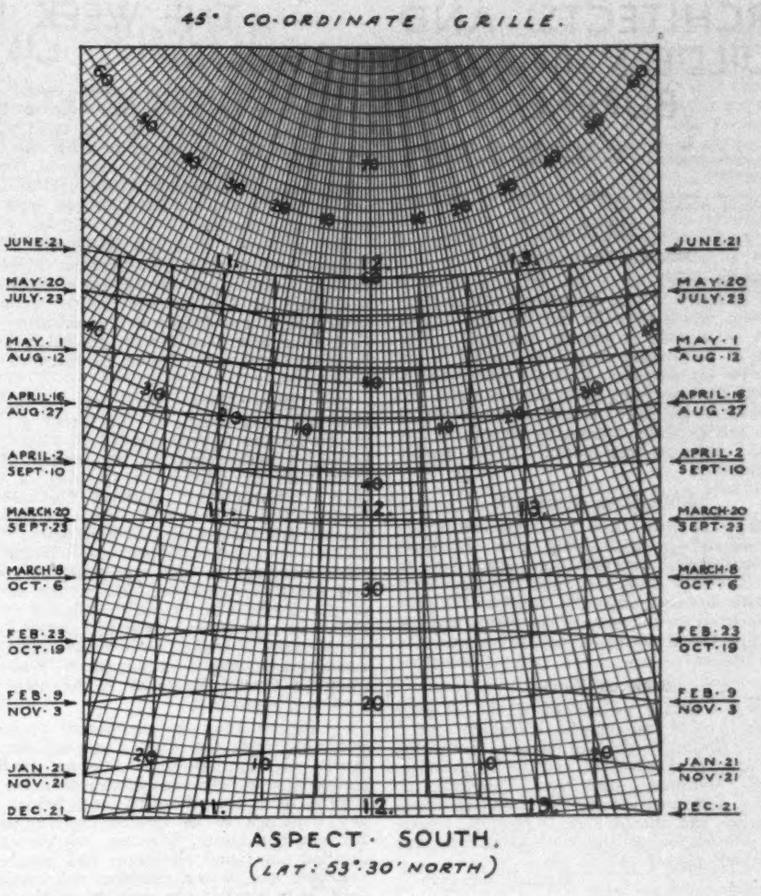
The defence stated shortly was a denial that the plaintiffs had disclosed any cause of action, but at the trial defendants submitted to an account.

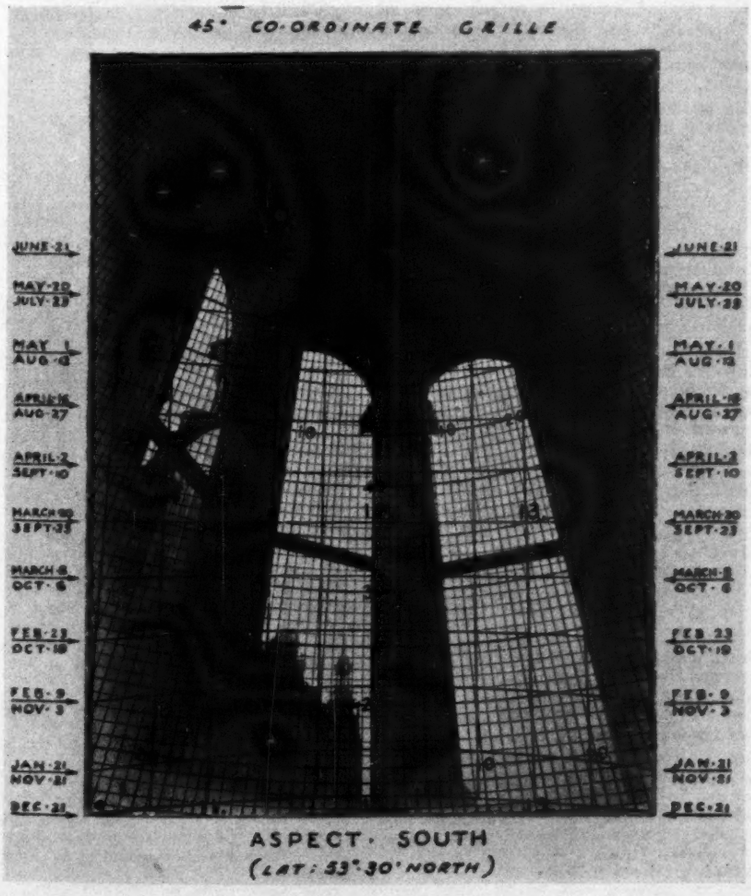
At the trial, Mr. Justice Luxmoore held that the engineers were entitled to succeed, and made the following declaration:—That upon the true construction of the agreement moneys payable to the plaintiffs under Clause 3 were to be calculated at the rate of 5 per cent. upon capital outlay during each year upon the extension or reconstruction or conversion of the electricity supply undertaking in Leatherhead in respect of which the consulting engineers were instructed in that year to prepare detailed plans and specifications within Clause 2 of the agreement. The defendants were ordered to pay the costs of the action, the costs of the account being reserved.

The appellant's case was that the form of the declaration as granted by the judge did not sufficiently define their rights under the agreement, but the Master of the Rolls and the Lords Justices held that it did, and dismissed the appeal with costs.

SOLAR PATHS

It is not generally known that it is now possible to record photographically the apparent paths of the sun at various periods of the year, and also to indicate, at the same time, the hours of the day at which the sun would be seen from any point. The necessary data can be obtained by photography in one or two seconds in respect of any window through which the light of the sun ever passes. Good photographic results of this kind have, we understand, been recorded by the Swarbrick Photo-Theodolite, which was devised by Mr. John Swarbrick, F.R.I.B.A., of 39, Maddox-street, London, W.1. We reproduce a typical co-ordinate grille, on which the apparent solar paths and hours of the day have been indicated, and also a photograph of a window on which the same grille has been superimposed. By means of this instrument it is possible to obtain data of this kind before a proposed building has been erected, as portable models of window openings may be placed on the site and photographs taken. A series of grilles of this kind have been constructed for London and elsewhere, so that photographs may be taken and the insolation data recorded in respect of windows in every conceivable position. Naturally, the positions of the apparent solar paths vary according to the latitude of the place in which the building is situated. It should be pointed out that the hours indicated on the grilles record Apparent Solar Time and not Greenwich Mean Time. The differences between Apparent Solar Time and Greenwich Mean Time may be readily ascertained with accuracy if occasion should arise. The only previously published article on the use of the Swarbrick Photo-Theodolite in this way occurs in a paper by Mr. A. C. Stevenson, M.Sc., F.R.A.S., of University College, London, which was entitled "On the Penetration of Direct Sunlight into Interiors," and appeared in the "Journal of Scientific Instruments" of July, 1932.





EXHIBITION NOTES

The Walker Galleries.

These galleries are holding an exhibition of furniture from the Queen's Carving School at Sandringham. At the school, boys from the estate are trained in a useful craft, and recently work has been found for men badly disabled in the War. The exhibition contains many useful articles of furniture, soundly constructed and devoid of all unnecessary ornament. The majority of the pieces are Sheraton in character. No. 18, a mahogany reading table, is a pleasing little piece, refined in character, with nicely turned legs and adjustable book-rests. No. 4, an inlaid mahogany round table, is simple in design and of good proportions. The inlay work is executed with considerable skill in No. 7, an inlaid mahogany oval table. Amongst the many other pieces of utilitarian character are a mahogany bookcase, No. 53, and No. 6c, a mahogany work-table, quite a desirable little piece. The prices of the exhibits are most reasonable.

At the same gallery are being shown a collection of water colour drawings and sketches by early English artists. Many of these are charming examples by such men as W. R. Beverley (1811-1889). No. 8, "Fish-boat Beached," is a direct little evening effect, recorded with unhesitating brush work. George Morland (1763-1804) is represented by No. 135, a characteristic sketch entitled "Postboys at an Ale-house Door." To mention such names as W. Callow, R.W.S., T. Collier, R.I., David Cox, Copley Fielding, G. A. Fripp, R.W.S., C. Green, R.I., T. Rowlandson, T. M. Richardson and many others should be sufficient attraction for the connoisseur and collector. The pictures are all small and of low price, which is an advantage in these days.

ARCHITECTS' AND BUILDERS' INQUIRY BUREAU

We are glad to give questions and answers, but cannot accept responsibility for contributed replies, especially on legal matters.

We do not undertake to reply to inquiries concerning proprietary materials.—ED.

QUESTIONS.

Concrete Floor Finish.

SIR,—I wish to "top off" a concrete floor (subject to foot wear only) with a composition which shall be dustless and not so hard or so cold as cement concrete. The price of proprietary magnesite brands is too high for my purpose. I have a faint recollection of a recipe using hard wood sawdust and asbestos short fibre, mixed with silicate of soda and Portland cement (or something like that). Help in this matter will be greatly appreciated. T. C. M.

Worm-eaten Woodwork.

SIR,—The floor joists and a portion of the flooring over a small cellar in an old house are fairly badly worm-eaten in parts. Cutting out defective woodwork and treating with carbolic has been advised. Could any of your readers tell me the name of the insect, and say whether the above treatment suggested would be effective? READER.

Book on Timber.

SIR,—I should be obliged if one of your readers could recommend a modern publication dealing with all classes of timber, particularly hardwoods and their qualities, origin, treatment, uses, etc. The book (or books) I require are for study and reference purposes and should give, if possible, practical information on the most up-to-date uses to which timber can be put.

WORKS MANAGER.

[An answer has been posted to this correspondent.]

ANSWERS.

Unclimbable Fence.

[ANSWER TO "A. H. H.," MARCH 31.]

SIR,—Boys can and will climb anything, and will be attracted by difficulties. The fixing of standards bent inwards at about an angle of 60 deg., with three strands of barbed wire, will probably give them the greatest difficulty to surmount. The standards need to be 2 ft. 6 in. to 3 ft. high above the coping. Coping with broken glass set in cement is probably more effective, but besides being barbarous is unsightly. FENCIT.

Cost of Bungalow.

[ANSWER TO "NOVICE," MARCH 31.]

SIR,—Taking your correspondent's nom-de-plume quite literally, I assume it will be news to him that there is a profession known as architecture, capable exponents of which are to be found within access of every district in the country. His best course is to seek one of these and place his interests entirely in his hands. He will then doubtless become the owner of a property of real permanent value. This appears to be a size of building which is likely to cube up to about 18,900 cu. ft., costing between £800 and £900.

ARCHITECT.

Repairing Fibrous Plaster Joints.

[ANSWER TO "D. D. S.," MARCH 24.]

SIR,—This should be done by a skilled specialist and is usually carried out in plaster of Paris, which is one of the few plasters which expand in setting and so fills out thoroughly. PLASTER.

Limited Competition.

[ANSWER TO "COMP," MARCH 24.]

SIR,—On the facts stated, "Comp" should commence an action for reasonable remuneration for the abandoned work on the basis of the work actually done; but not on any scale of fees for abandoned work, for none has been agreed. SURVEYOR.

THE WEEK IN PARLIAMENT

Westminster Amenities.

SIR WILLIAM DAVISON asked the First Commissioner of Works what action the Government were taking, in connection with the London County Council or otherwise, to protect the amenities of the Palace of Westminster and Westminster Abbey against the erection of excessively tall buildings in their immediate vicinity.

SIR ASSHETON POWNALL asked the First Commissioner whether his attention had been called to the report of the town planning committee of the London County Council dealing with the danger to the amenities of Parliament-square of certain projected new buildings; and what action he intended to take.

MR. ORMSBY-GORE replied that his attention had been drawn to the recent action of the London County Council in passing a resolution authorising the preparation of a town planning scheme for an area in the City of Westminster including Parliament-square, Old Palace-yard and Abingdon-street. He understood that this action had arisen out of proposals for the erection of office buildings on sites in Abingdon-street and Great George-street. Under the terms of the Town and Country Planning Act, 1932, any such scheme must be submitted to the Minister of Health, who would take into consideration any representations received from the Commissioners of Works with regard to the proposal.

So far as the Abingdon-street proposal was concerned, the First Commissioner of Works already possessed statutory powers giving him a very considerable measure of control over the elevation and height of any buildings to be erected on that site. He was not aware, however, whether any detailed plans and elevations had yet been prepared, and he was therefore not yet in a position to express any opinion on the proposals. As regarded the Great George-street proposal, the Commissioners of Works had no control except in such matters as rights of light and easements as arose out of the ownership of the land in Parliament-square immediately adjacent to the site in question.

SIR W. DAVISON said that the right hon. gentleman had made a reference to the Ministry of Health having certain powers under "the Act." To which Act did he refer?

MR. ORMSBY-GORE said that he was referring to the Town and Country Planning Act of last year. The first step, clearly, was for any proposal by the private owners for rebuilding on these sites to go to the L.C.C.; it then went from them to the Minister of Health, who, before giving his decision, would consult the First Commissioner of Works.

SIR A. PARNALL asked for an assurance that every possible step would be taken to see that there was no repetition of what had happened in Carlton House-terrace.

LT.-COMMANDER AGNEW inquired whether the First Commissioner of Works had any control over the architectural style of any new buildings on the Abingdon-street site.

MR. ORMSBY-GORE replied in the negative. He did not think he had any control, except over the actual height and the general character of the elevation in relation to the surrounding buildings. He could not prohibit building there altogether.

MR. MAXTON asked if the Great George street land was not in the ownership of the Ecclesiastical Commissioners, and if the House had no control over the operations of those Commissioners?

MR. ORMSBY-GORE said he understood that the bulk, but not all, of the Abingdon-street site was in the ultimate ownership of the Ecclesiastical Commissioners, but there was one private owner who owned three houses. The Great George-street site was, he believed, a private freehold.

The Unemployed.

SIR HENRY BETTERTON, Minister of Labour, informed Mr. McEntee that the following was a statement of the wholly unemployed persons aged 18 and over on the registers of Employment Exchanges in Great Britain who were applicants for work in certain wood-working occupations:—

	January 23, 1933.	January 21, 1929.
Carpenters and Joiners	46,017	15,503
Wood Sawyers	3,897	1,615
Woodworking Machinists	6,198	1,723

In reply to Major Nathan, SIR HENRY BETTERTON gave the following table of the numbers of insured persons aged 16-64 recorded as unemployed in Great Britain at the dates specified in some of the industry groups concerned in the production of the classes of goods which are subject to duty under the Import Duties Act, 1932:—

Industry Group.	Aug. 24, 1931.	Feb. 22, 1932.	Feb.20, 1933.
Brick, Tile, Pipe, etc., Making...	14,401	19,348	22,102
Pottery, Earthenware, etc. ...	28,413	25,658	25,041
Sawmilling, Furniture and Woodwork:—			
Sawmilling and Machined Woodwork ...	10,478	12,495	13,141
Wood Boxes and Packing Cases	3,417	3,578	3,453
Furniture Making, Upholstering, etc. ...	24,277	28,693	30,475
Woodworking not separately specified ...	5,592	5,037	5,048

Commissioners of Crown Lands.

SIR A. STEEL-MAITLAND asked the Prime Minister whether he could now announce the terms of reference and composition of the proposed Standing Committee to advise the Commissioners of Crown Lands in connection with the development of the Crown urban property.

MR. MACDONALD said that the terms of reference were: "To advise the Commissioners of Crown Lands on questions remitted to them by the Commissioners relating to the development of the Crown's urban estates, with particular reference to æsthetic and similar considerations of public interest." It would be understood that it was open to the Committee, if they so wished, to offer advice on any matters of public interest, affecting property administered by the Commissioners of Crown Lands, other than those arising on cases formally remitted to them. The Committee had been constituted as follows:—Lord Gorell (chairman), Lord Jessel, Mr. Frank Pick, Sir Raymond Unwin, Sir John Oakley and Mr. E. V. Lucas. The appointments were for a period of four years; the Committee could co-opt *ad hoc* for purposes of consultation, and they were also being asked to co-opt representatives of local government bodies specially concerned with any individual project. Arrangements would be made before action was taken on any question which had been remitted to the Committee to make public their recommendations. The full reports would be regarded as confidential. As was explained by the Minister of Agriculture during the course of the debate on February 28, the appointment of this Committee did not in any way affect the arrangements as regarded the Royal Fine Art Commission, whose advice on questions within their sphere would continue to be sought as heretofore.

THE BUILDING TRADE

MINOR PROBLEMS OF CONSTRUCTION AND REPAIR—XIV

By A BUILDING SURVEYOR.

HEATING AND VENTILATING FLUES.

Though it is customary to distinguish between heating and ventilating flues, in essentials they serve the same purpose, which is that of carrying off vitiated air to a point at which it may be discharged with a minimum of inconvenience. Smoke, a product of incomplete combustion, must be discharged at a height in order to minimise the disfigurement of buildings by dirt, and to avoid, as far as may be, other inconveniences; but the selection of a high point of discharge has other advantages. Within limits it is an advantage to secure a high point of discharge for all vitiated air, whether it results from admixture with the products of combustion from a gas stove or whether it be the air we expel when we breathe.

Gas Flues.

Every year a number of fatal accidents occur that can be more or less definitely traced to the improper fixing of gas appliances used for heating rooms or for the supply of hot water for domestic purposes. A number of these cases occur in bathrooms fitted with geysers, and almost invariably the evidence at the inquests which follow discloses that the apparatus had not been fitted with a flue discharging directly into the outer air. In one such recent case the local authority was so much impressed by the evidence that it resolved to amend its by-laws, if possible, so that it could demand that a flue should be installed with this and all other types of heating apparatus consuming gas.

The question finally resolves itself into one of adequate ventilation, and though some types of gas-burning apparatus, by reason of their low consumption (and efficiency of conversion or consumption), may be quite safe to use in an ordinarily well-ventilated room, their presence does definitely call for adequate methods of securing ventilation. It is difficult to see how this adequate ventilation could be secured by legal enactment, except by making use of a flue communicating with the outer air compulsory. With some fittings, such as gas-heated radiators, such a flue need have only a very small area, and its formation is usually a very simple matter.

The products of combustion given off by a gas-burning apparatus are less harmful when the gas is properly burned than when for some reason, such as a defect in the apparatus, dirt in the air passages, or other faults, combustion is imperfect. It is not, however, always easy to secure that under all conditions perfect combustion shall take place all the time. Down draught in a flue, for instance, may seriously interfere with combustion, and even where this does not bring about conditions of danger it leads to waste. Apart from that, in considering the question of adequate ventilation, we may use a reasonably safe rule and regard the consumption of one foot of town gas as being equivalent in its effect on the atmosphere of a given room to the occupation of the room by one adult for one hour. Thus, if two persons occupy a room for an hour, and the heating apparatus is unconnected to a flue, and during that time they use up five cubic feet of gas, the results will be similar to those which would obtain if seven persons had occupied the room with the apparatus out of use. With the fitting in good order, five persons would vitiate the atmosphere to a greater extent than would the consumed gas, but acceptance of the rule would provide us, under average circumstance, with a margin of safety, which might well be needed in the case of a usable but defective apparatus. In the case of geysers in small bathrooms, experience goes to show that some of them are so badly installed that the combustion is not complete, and others develop faults through neglect or ill-usage. As they may consume gas at the rate of 150 feet cube per hour, the effect on the air in the room might, in the absence of a suitable flue, be the same as (were it physically possible) if one hundred and fifty persons were breathing in the room over a similar length of time. With a really good, properly fitted and properly maintained geyser the risk might not be a very serious one, because of the short time the geyser would be in use, but a layman cannot be expected to realise the importance of proper maintenance, and the fitting of a flue should be made compulsory. That, however, is not enough, for the fitting of a badly designed flue might bring in its train new dangers, especially so where the supply of gas is controlled by a meter requiring the insertion of coins. In any case, a badly designed flue leads to waste of gas. It is not difficult to see that the provision of a hood and flue is necessary to a gas cooker. Further, should the gas be on accidentally, but not lighted, the presence of a hood and flue will lessen the risk of explosion.

Before we can usefully say anything as to how a gas flue should be constructed, it is necessary to give some consideration to the forces available, for at the best such forces are small and difficult to make use of and control properly. In the first place, it is necessary to note that all movement is the resultant of applied forces, natural or mechanical. Gases tend to move in a flue because when they are expanded by heat they are, volume for volume, lighter than air. It may help a student to regard air as being in many respects similar to a liquid, such as water. Anything will float in water that volume for volume is lighter than water, and anything in air that is lighter than air. If two articles of the same size but much different weight and both lighter than water are placed and held at the bottom of a vessel containing water and are simultaneously released, the lighter of the two will reach the surface earlier than the other. This is because the water displaces them and forces them up. For the same reason that cold water will displace and force up hot water in a domestic hot-water supply system, cold air will displace and force up hot air or any gas, hot or cold, which is lighter than air. Town gas is lighter than air, but it consists of a number of gases, some of which when liberated by combustion would, were they not expanded by heat, be heavier than air. It is not necessary for our present purposes to consider all the actions and reactions that thus arise. It is sufficient to say that in relation to the design and construction of flues they all have a bearing, and we may proceed to set down some of the things the engineers and chemists have told us, with perhaps a little better appreciation of what it is that they are aiming at.

It is important to give a flue as much vertical height as circumstances will permit, for in the difference in weight between a column of hot gas and a column of cold air lies the power available for pushing up and out the products of combustion. The power is, however, even under the best of conditions small, for in a flue having a vertical height of 20 ft. and being filled with gases heated to 300 deg. Fahr., the expelling force would not be sufficient to overcome a wind blowing into the flue outlet at fifteen miles per hour, nor to overcome the static pressure that may be set up by the piling up of air by the wind in the angle of a building or under overhanging eaves or in other ways. If a down draught is thus caused, the hot gases are driven back on to the burners, and by depriving them of the necessary fresh air interfere with proper combustion and harmful toxic products of partial combustion are given off into the room. It is better that the flue should not discharge into the outside air at all than that this should happen, but as already shown, it is at least desirable and often necessary that a flue should discharge into the outer air. On the other hand, it is not possible to guarantee that any flue terminating below ridge level shall on no occasion be subjected to downdraught or be temporarily unable to function properly owing to static pressure. This being the case, a baffler should always be fixed on a flue pipe that discharges into the outer air.

Terminals.

The main purpose of the baffler is to divert the down blow from the burners and not, as is sometimes supposed, to prevent down blow. To a considerable extent the efficiency of a flue is dependent on its terminal. A good terminal should :—

(*a*) Offer as little resistance as possible to the outward flow of the gases.

(*b*) Offer a stout resistance to such penetration of the wind as would set up down blow.

(*c*) Exclude rain from the flue as much as possible.

(*d*) Be of durable quality and reasonably good appearance.

Obviously these qualities necessitate a certain amount of compromise in design.

The terminal so often seen in cheap work that consists of a cone cap riveted to a sheet-iron sleeve fulfil condition *c*, and, to some extent, in favourable positions, condition *b*: but it offers high resistance to the outward flow of the gases, and therefore fails in regard to condition *a*, and usually it is of very flimsy construction, and few would consider it of good appearance. The flat disc and the inverted saucer patterns fail at the same points. What is required is a terminal of the air pump type, constructed on similar lines to those supplied by the best makers for use with soil pipes, or for the ventilation of small compartments. They are obtainable from any first-class maker of gas heating appliances.

The position of the baffler has an important effect on the thermal efficiency of the apparatus with which it is used, and it should be fixed at not less than 1 ft. nor more than 2 ft. above the top of the apparatus. To some extent this may have to be modified a little according to the type of baffler used, a point which will be returned to in the next article. A mistake that is sometimes made with the well-known cage baffler often fixed on flues serving geysers would not be made if the fitter properly understood its functions. He would not, for instance, fix it outside the building, as has often been done.

A BUSINESS ANNOUNCEMENT

We are informed that Mr. Geo. L. Edwards, M.Inst.Struct.E., has joined Messrs. William Downs, Ltd., of Walworth, the old-established South London firm of builders and contractors. Mr. Edwards has been a prominent member of the Council and the Administrative Committee of the London Master Builders' Association, and was a prime mover in the important amendments of the constitution of the National Federation of Building Trades Employers which were passed last year. He brings both technical skill and administrative competence to his new duties, having had a varied experience in the Colonies and in borough council work in this country. The firm of Messrs. William Downs, Ltd., has, during more than sixty years of activity, carried out many important works, amongst the best known of which are the South London Hospital, the premises of the British-American Tobacco Company, Coutts's Bank, Knightsbridge Court, the covered stands at Kennington Oval, Downing College, Cambridge, and many churches. The numerous friends of Mr. Edwards in every branch of the building industry will wish him success in his new sphere of activity.

SUB-FLOORS FOR RUBBER FLOORING

By S. A. BRAZIER, M.Sc., and G. F. THOMPSON.

One of the major problems in the use of rubber flooring is the question of a suitable sub-floor. Most authorities with extensive experience in the laying of rubber floors would agree that even under widely differing conditions, if the sub-floor is in a suitable condition at the time of laying, little or no trouble will be experienced if the building conditions do not permit subsequent percolation of water. Wooden floors, if free from oil, paint, grooves, etc., are highly satisfactory, and present very few problems. It is very important that they should be thoroughly seasoned and quite free from moisture.

The usual sub-floor employed in modern buildings where rubber flooring is used is a concrete base finished with a cement screeding. Although individual specifications may vary, the composition most usually recommended for this screeding is one part of Portland cement to two or two-and-a-half parts of well-washed sand. Where time is not limited this type of sub-floor on floors which are satisfactorily suspended can be definitely recommended as giving the most satisfactory results for rubber flooring, but has a distinct disadvantage in that under the usual conditions prevailing in this country a minimum period of from four to six weeks must be allowed to ensure that it is sufficiently dry for laying. The magnesium oxychloride type of cement is also capable of giving very satisfactory results, but here again sufficient time must be allowed for complete drying out, and in view of the contract time allowed for the completion of the building, it often happens that time forms a very serious factor. Such conditions may often influence a decision as to the type of flooring which will be ultimately used, and in many cases this has been to the disadvantage of the use of rubber.

It is in connection with these problems that the more extensive use of mastic asphalt as the final underlay is worth serious consideration. It is recognised that the use of mastic asphalt in this connection is no novelty, but it is felt that in many cases its employment has been more or less haphazard and that there has often been a lack of knowledge as to the fundamental properties such a material must possess. Principally, it is obvious that if asphalt is to provide an efficient base on which to lay rubber flooring, it must conform to certain definite characteristics, and in addition to providing satisfactory anchorage, it must have a load carrying capacity which provides a margin of safety well above that required for normal traffic conditions. As a result of experience covering a number of years and under widely different conditions both in this country and abroad, it is felt that there is a definite case for the employment of mastic asphalt.

Tests for Concrete Dryness.

Before considering some of the advantages in detail, it may be advantageous to return to the question of the direct use of concrete for a moment. It has previously been mentioned that it is usually necessary to allow 4-6 weeks in this country for the satisfactory drying out of a concrete sub-floor. Unfortunately, this process cannot be speeded up satisfactorily by artificial means, and if it is surface dried only, cracks will be liable to develop, and in addition, any moisture in the substructure will sweat to the surface, and reduce and even ultimately destroy the bond between the rubber and the screed. The use of a rapid setting cement of the aluminous type has not been found to give completely satisfactory results and has given difficulty with adhesives which under normal conditions give most satisfactory service.

In this connection two satisfactory methods for testing a cement screed for the presence of moisture may be mentioned.

(*a*) A few pieces of anhydrous (or calcined) calcium chloride are placed on the cement floor under a sheet of glass, the edges of which are well "puttied" round to prevent penetration of moisture at the sides.

If this is examined after 12 hours and the calcium chloride has not become wet, the floor may be safely regarded as sufficiently dry.

(*b*) A hot electric iron placed on the cement screed for a short time, say, one or two minutes, should not bring any moisture to the surface. If this method is used, care must be taken not to leave the iron on too long or the heat may disintegrate the cement locally.

Uses of Mastic Asphalt.

It is under such conditions that a mastic asphalt sub-floor on which the rubber can be laid with safety can solve an otherwise extremely difficult problem. This is particularly the case with ground floors, where it is not possible for these to be suspended, and although fire-proof floors of the magnesium oxychloride-sawdust type are very satisfactory, the time of drying and relative cost are factors which become factors of distinct importance. For old buildings where the existing floor is uneven, or in bad condition or not suspended, the use of such a mastic asphalt layer can be considered as a safeguard which will probably save the development of trouble and possible relaying costs in the future. Even badly surfaced wooden floors can be considered under this category under some conditions.

Although agreement may be expected to the principle of the use of a mastic asphalt sub-floor for new buildings where the cost of laying can be offset against the cost of an equivalent concrete screed, justification for its use is not so obvious where it forms a cost additional to that of the rubber flooring, and in many cases relative costs play an important part in the ultimate decision. If rubber be laid direct on to concrete, however, it is essential for the base material to be in an ideal condition to receive the rubber, otherwise the chance of a satisfactory union between the two is considerably reduced. Even if this preliminary difficulty is successfully overcome, there is always the possibility that moisture may percolate through the concrete at a later stage, with the result that gradual disintegration of the cementing agent used will take place. This will destroy the bond between the rubber and concrete, with the consequent failure of the rubber to maintain its position. Although the development of this trouble may be right out of the control of the contractor, the blame is often laid at the door of the rubber flooring.

If, however, a thin layer of asphalt is interposed between the rubber and the concrete, an efficient damp course is provided and such difficulties are avoided. A further advantage is that asphalt forms an excellent medium for the retention of the rubber cement and the formation of an extremely good bond. This is probably due to slight penetration of the surface of the asphalt by the solvent if an adhesive made by the use of materials such as petrol or benzine is used. Although under the right conditions this penetration and softening of the surface of the asphalt mastic can assist the adhesion of the rubber flooring, it must not be carried too far or the surface layer of the mastic will be definitely softened, and in this case the rubber may subsequently lift with a backing of mastic firmly fixed to it.

The Use of Adhesives.

When using adhesives employing paraffin hydrocarbons as solvents, therefore, care should be taken to see that all solvent is allowed to evaporate before the rubber flooring is laid, otherwise the solvent will be sealed below the rubber and extensive penetration and softening of the bitumen layer may take place. A similar remark, of course, applies to any adhesive on which a liquid having a solvent action for bitumen is used. It has been generally recognised that rubber resin cements form excellent adhesives for rubber flooring, but are definitely attacked by moisture in the presence of lime. Although the use of such cement is, therefore, avoided for concrete floors, these do not present this difficulty when an asphalt layer is used.

For economic reasons it is desirable to keep the cost of the mastic underlay to the minimum necessary to produce satisfactory results, and a layer ½ in. in thickness can be considered as a general standard.

BUILDERS' CLERKS' BENEVOLENT INSTITUTION

The fifty-third annual dinner of the Builders' Clerks' Benevolent Institution was held on Tuesday, April 4, at the Holborn Restaurant, W.C. Mr. William Dove, F.I.O.B., President of the Institution, in proposing the toast of the "Builders' Clerks' Benevolent Institution," said that the Institution was formed with the idea of granting pensions to the widows and spinster daughters and other dependants of builders' clerks. The Institution had been founded sixty-six years, and it was a proud boast that the Institution had never turned down one single application. Last year they paid out £823 in pensions and £74 in temporary relief, which showed the value the Institution was to the industry. They had sustained a big loss by having so much money invested in five per cent. loan, which, through the Government, they had had to convert to 3½ per cent., which had meant a loss of £110 per annum, or three permanent pensions.

In replying to the toast of the "Guests," proposed by the President, Professor A. E. Richardson said that the Institution was lacking a crest, and he suggested an ark with a dove above. Everyone had enjoyed the evening, and he wished the Institution every success in the future.

Major F. A. Wallis, Immediate Past-President, proposed the toast of the "President." He said that wherever building was carried on, the name of Dove Bros. was always honoured. They all knew the work the late Frederick Dove had done for the Institution. The late Mr. Dove had held, he thought, every office possible in the building industry, and he had also done good work on the London County Council. In concluding, he would thank all those who had helped to make his year of office so successful, especially Mr. John Austin, secretary, and Mr. S. H. F. Pulley, the hon. treasurer.

The President, responding, said he thanked Major Wallis for his remarks about himself and for his kind words about his father, because they all knew how he had worked for the Institution. Most of the thanks for the work done were due to the Committee, especially Mr. John Austin, who had been the secretary for the past thirty-five years; he did not know what the Institution would have done without him. They also had only had three treasurers from the commencement of the Institution. The members of the Committee were all old in connection with the work and time they had given to the Institution; therefore he thought the praise was due to the Committee and not to himself. He concluded by saying that £625 had been raised, and by thanking everybody for their help.

Reinforcements for Roads.

A display which aroused considerable interest at the British Industries Fair at Birmingham was the "Quarry to Road" exhibit. This was planned to demonstrate the various stages in the making of a road, and included, in addition to sections showing the construction of several types of road from excavating to surfacing, the working of the machinery for preparing the aggregate, crushing and grinding plant and other accessories. It was divided into nine sections. The exhibit covered about one and a half acres of open ground adjacent to the main hall, and comprised twelve or more different types of road. Practically the whole of the reinforced section was laid with BRC. Fabric No. 64, ordered from the British Reinforced Concrete Engineering Co., Ltd., of Stafford.

HOT WATER SUPPLY

In reply to a correspondent who, in a recent issue,* asked for information on how to obtain a hot water supply from a gas copper in a scullery to a bath directly above, the British Commercial Gas Association supply the following notes, taken from "Gas and Gas Coke for Hot Water Supply" :—

In many municipal housing estates, blocks of dwellings and similar premises, the wash boiler is fitted to do double duty as a clothes washer and as a bath-water heater. When used for heating bath water the problem of transmitting the hot water from the boiler to the bath has to be considered, and recent installations of this nature have led to investigation of the several methods. Four methods are available, as shown in the accompanying diagrams. They are, in order of both simplicity and cost :—

(1) Simple draw-off system.

(2) Syphon system.

(3) Pump system.

(4) Gravity feed system (not recommended).

The Simple Draw-off System (Fig. D1).—Provided the top edge or lip of the bath is not higher than 2 ft. 2 in. from the floor line and there are no obstructions to be crossed higher than this, the simplest method is to take a pipe from the draw-off over the edge of the bath and attach a length of hose so that it terminates below the level of the bottom of the pan of the wash boiler. A stop cock should be provided on the pipe between the boiler and the bath. If the boiler be very near the bath a short length of hose attached to the draw-off tap will be all that is necessary.

The Syphon (Three-Way Valve) System (Fig. D2).—This system must be used where the conditions are the same as for the preceding system, except that an obstruction such as a doorway exists, which necessitates raising the draw-off pipe above the level of the water in the wash boiler. A three-way valve is mounted above the wash boiler and connected to the cold supply, the hot water outlet to the bath, and to a dip-pipe, which extends to within half an inch of the bottom of the boiler pan.

The method of operation is as follows :—

(1) The three-way valve is turned so that cold water flows into the boiler.

(2) When the boiler is full the valve is turned to shut off the cold water.

(3) When the water is hot, the valve is turned so that cold water flows for a short time straight through to the bath.

(4) The valve is now turned over so that the cold water is shut off and the hot water is syphoned out into the bath.

The hot water outlet pipe can be taken up over a door, etc., as shown in the diagram, but it must discharge at a point below the bottom of the boiler pan. If the end of the tubing above the bath be higher than the bottom of the pan, a short length of hose may be dropped to the bottom of the bath to maintain the syphon.

The Pump System (Fig D3).—When the bottom of a bath is higher than 2 ft. from the line of the floor or base on which the wash boiler is standing, it will be necessary to adopt the pump system. The cold water tap is fitted over the wash boiler in the normal manner and the outlet pipe is taken from the bottom of the pan of the boiler. A small semi-rotary pump is fitted to the outlet pipe. This system must be employed, of course, when the bath is on a floor above that on which the wash boiler is fitted.

The Gravity Feed System (Fig. D4).—This system consists of taking the cold water supply to the bottom of the boiler pan and running a hot water pipe from a few inches below the top of the pan to the bath. When the water is hot, the cold stop cock is opened and the incoming cold water displaces the hot water upwards and out through the draw-off pipe.

This method has two disadvantages :—

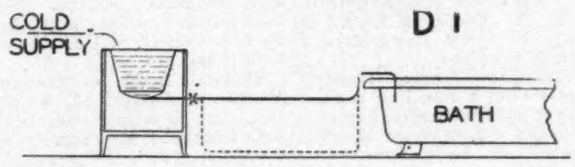
(*a*) It takes a long time to transfer the water from the boiler to the bath. It took 21 minutes with the 8-gallon G.L.C. Standard Wash Boiler.

(*b*) Considerable mixing occurs between the hot and cold water, so that the final bath temperature is not too good.

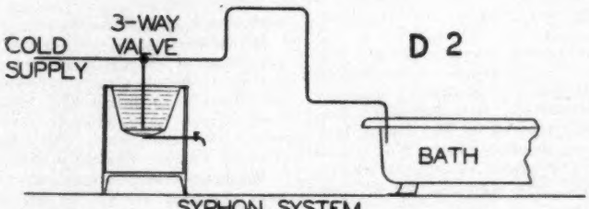
The system has nothing to recommend it, and it should not be adopted, as all contingencies can be met by the three other methods already described.

It should be noted that systems D1 and D3 can be used where the boiler is not fitted with a cold supply.

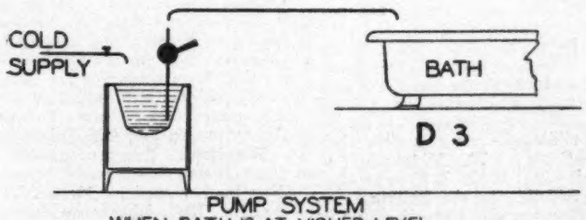
* March 17, 1933, page 464.



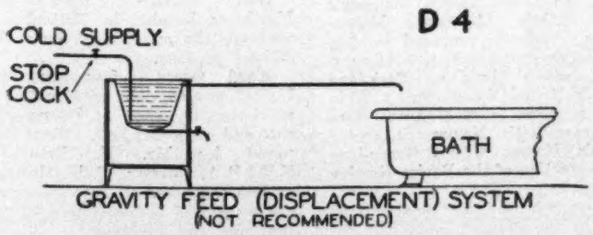
SIMPLE DRAW-OFF SYSTEM



SYPHON SYSTEM
WHERE IT IS NECESSARY TO RISE OVER A DOORWAY ETC



PUMP SYSTEM
WHEN BATH IS AT HIGHER LEVEL



GRAVITY FEED (DISPLACEMENT) SYSTEM
(NOT RECOMMENDED)

TOWN PLANNING

The following town planning progress in England and Wales is recorded for the month ended February 28 :—

Schemes approved (Stage CC).—Glamorgan : Cardiff R.D.C. (No. 2); Kent : Dartford U.D.C.; Lancs : Blackpool C.B. (Scheme No. 1), Preston C.B. (scheme submitted by Preston and District Joint Town Planning Committee); Yorks (W.R.) : Knaresborough U.D.C.

Draft Scheme adopted (Stage BBB).—London : L.C.C. (Fulham No. 9).

Preliminary Statements approved (Stage BB).—Kent : Ramsgate T.C. (No. 2); Lancs : Kirkham U.D.C.; Middlesex : South Mimms R.D.C. (No. 1); Surrey : Epsom R.D.C. (Chessington).

Preliminary Statements received (Stage B).—Glamorgan : Pontypridd U.D.C.; Herts : Hatfield R.D.C.

Resolutions received (Stage A).—Bedford : Dunstable T.C., Luton T.C. (No. 2), Ampthill R.D.C.; Berks : Wallingford T.C. (resolution passed by Wallingford Joint Town Planning Committee), Wantage U.D.C.; Bucks : Linslade U.D.C.; Cheshire : Congleton T.C.; Buglawton U.D.C.; Congleton R.D.C.; Essex : Purfleet U.D.C. (Additional Areas); Kent : Sheppey R.D.C.; Lancs : Rochdale C.B. (No. 4), Littleborough U.D.C. (No. 2); Northampton : Kettering R.D.C.; Oxford : Oxford City (Supplementary Areas), Bullingdon R.D.C. and Ploughley R.D.C. (resolution passel by Mid-Oxford and North Berks Joint Town Planning Committee); Shropshire : Newport (Salop) U.D.C.; Southampton : Alton U.D.C. (No. 3); Suffolk : Aldeburgh T.C. (No. 2), Blything R.D.C.; Surrey : Croydon C.B. (Fairfield), Godalming T.C., Reigate T.C.; Sussex : Hastings R.D.C.; Stafford : Cheadle R.D.C. (Western Area); Warwick : Rugby R.D.C.; Yorks (W.R.) : Huddersfield C.B.

NEW BUILDINGS IN LONDON

Barking.—FACTORY.—Messrs. H. Thomas and Co., 118, Tower Hamlets-road, E.7, are to erect a furniture factory at River-road. Messrs. Magwin and Co., 71, Odessa-road, E.7, have just commenced upon the building work, under the direction of Mr. L. C. Beards, the building owners' architect.

Barking.—HOUSING, ETC.—The T.C. is to undertake a clearance scheme at Bifrons-square, Axe-street, and Broadway. Fourteen shops with living accommodation above are proposed. The Borough Engineer and Surveyor has been instructed to prepare a scheme for the erection of 265 houses or flats upon the Movers-lane housing estate, at an estimated cost of £71,511. Tenders are shortly to be invited.

Becontree.—HALL.—The L.C.C. has recommended a plot of land in Ripple-road and Goresbrook-road, to be sold to the Church of England authorities for the erection of schools and a church hall on a portion of the land.

Bloomsbury.—NEW UNIVERSITY.—Messrs. John Mowlem and Co., Ltd., Ebury Bridge-road, Victoria, S.W.1, have secured contract No. 1 for excavation and piling works in connection with the new University buildings. The architect is Mr. C. H. Holden, F.R.I.B.A., of Messrs. Adams, Holden and Pearson, 9, Knightsbridge, S.W.1.

Bromley.—COLLEGE.—Property, known as the Old Palace, has been sold to the British and Foreign Schools' Society, 115, Temple-chambers, Temple-avenue, E.C.4. It is proposed to convert the building into a training college.

Buckingham Palace-road.—BUILDING.—The Westminster City Council has considered an application from Mr. E. W. Roberts, 16, Moreton-terrace, S.W.1, on behalf of Art Metal Construction Co., Ltd., for consent to certain temporary buildings at 199-203, Buckingham Palace-road, S.W.

Camberwell.—PREMISES.—Mr. E. W. Room, Four Elms, Dulwich Village, S.E.21, has submitted an application to the L.C.C. for the erection of a building at 28, Peckham-road, S.E., for the Camberwell Central Unionist Club, Ltd.

Croydon.—STATION.—Messrs. Bourne and Balmer (Croydon), Ltd., 97, George-street, Croydon, have acquired a site in Dingwall-road for a motor-omnibus passenger station, etc., with accommodation for 45 coaches. Plans are being prepared by Mr. Hugh Macintosh, F.R.I.B.A., 1, Imperial-buildings, East Croydon. No contracts placed yet.

Ealing.—BUILDING.—No. 30, The Broadway, is to be rebuilt. Plans are to go before the Corporation. The architect is Mr. Henry Braddock, 45, Dennis Park-crescent, S.W.20.

East Ham.—FACTORY.—A contract has now been placed for new factory and offices in Barking By-pass Road, the contractors being Messrs. Fairweather and Ranger, 111, Charing Cross-road, W.C.2. The architects are Messrs. C. J. Dawson, Son and Allardyce, Clock House-chambers, Barking.

East Ham.—HOUSES.—Mr. R. J. Slater, 199, Plashet-grove, East Ham, E.6, has prepared plans, which have been approved by the Council, for the erection of 102 houses in Millais-avenue, Reynolds-avenue, Leader-avenue and Leighton-avenue.

Farringdon-road.—REBUILDING. — Messrs. Greenham Demolition Co., Ltd., of Isleworth, are carrying out demolition work in connection with the rebuilding operations upon the large five-story building owned by Messrs. Falk, Stadelmann and Co., Ltd., which was destroyed by fire recently. No contracts have been placed yet. Messrs. Fuller, Hall and Foulsham, 125, High Holborn, W.C.2, have prepared the plans.

Greenwich.—BUILDING.—The Greenwich B.C. are inviting tenders for building works at 80, Shooters Hill-road, Blackheath, S.E.3, in conjunction with the Council's Maternity Home.

Hackney.—DWELLINGS.—The L.C.C. recommend £11,350 in respect of the construction of block 1 of dwellings on land adjoining the Northwold-road area, Hackney.

Hendon.—SHOPS.—The local council have approved a proposal for the creation of a shopping centre on the Watford By-pass Road and Mowbray-road, N.W., by the erection of shops and flats. The plans will be prepared under the direction of Mr. F. Howkins, 1, Russell-parade, Golders Green, N.W. No contracts have been placed yet.

Herne Hill.—BUILDING.—Messrs. F. W. Rees and Partners, 27, High-street, Croydon, have prepared sketch plans for the erection of a Sunday school and institute at the rear of the Congregational Church, abutting upon Red Post Hill. The scheme is at an early stage, and it is not expected that a building contract will be placed before July.

Highgate.—LABORATORY.—The L.C.C. recommend £3,429 in respect of the formation of a central histological laboratory by the adaptation of ward 9 at Archway Hospital.

Ilford.—COURT HOUSE.—Tenders are at present being invited for the erection of a Court House at Ilford. Plans have been prepared by the Architects' Department, H.M.O.W., King Charles-street, S.W.1.

Isleworth. — ADDITIONS. — The Middlesex C.C. has recommended the estimate of Mr. W. S. Try, of Cowley, Uxbridge, at £23,115, for additions to the Green School, Busch-corner. Mr. W. T. Curtis, F.R.I.B.A., County Architect, 10, Great George-street, S.W.1, has prepared the plans.

Kenley.—SCHOOL.—The Surrey County Council propose to erect a school on a site between the railway and Valley-road, Kenley. The county education architects are Messrs. Jarvis and Richards, 8a, Lower Grosvenor-place, S.W.1.

Kilburn.—SHOPS.—A row of 12 shops, with showrooms in the upper floor, are to be erected in Kilburn High-street, N.W. The contract has been placed with Messrs. George Moss and Sons, Ltd., 11, Station-parade, Ealing-road, Northolt. The architects are Messrs. Davies and Knight, 93, Mortimer-street, W.1.

Kingston-on-Thames. — PUBLIC-HOUSE.—The "Three Fishes" public-house is to be rebuilt for Messrs. Hodgson's (Kingston) Brewery Co., Ltd., Eden-street, Kingston-on-Thames. Plans are being prepared by Mr. Joseph Hill, F.R.I.B.A., 34, Gordon-square, W.C.1, and a contract will be placed as soon as possible after plans have been approved by the Corporation.

Lambeth.—DEVELOPMENT. — Plans, submitted by Messrs. Richard Ellis and Son, 37, Fenchurch-street, E.C.3, for the formation of a street between Brantwood-road and Poplar-walk, have been passed by the L.C.C. Development will take place there, but the scheme is at a very early stage.

Lewisham.—BUILDING.—The L.C.C. has recommended a plot of land in Downham-way to be let on lease to the London Young Women's Christian Association, of Central Building, Great Russell-street, W.C.1, for the erection of a building for use as a girls' club.

Northwood.—SCHOOL.—The Middlesex C.C. has recommended Mr. W. S. Try, of Cowley, Uxbridge, at £18,031, as the building contractor for the new senior Council school at Potter-street. Mr. W. T. Curtis, F.R.I.B.A., 10, Great George-street, S.W.1, is the County Architect.

Park-lane. — BUILDING. — The L.C.C. received notification from Messrs. Wimperis, Simpson and Guthrie, 61, South Molton-street, W., for consent to proposed frontage lines in connection with the rebuilding of Brook House, which abuts on Park-lane, Upper Brook-street and Wood's-mews, W.1.

Poplar. — EXCHANGE. — H.M.O.W. have placed a contract with Messrs. H. and J. Taylor, Canada House, Hither Green-lane, S.E.13, for the erection of the Poplar Employment Exchange.

Poplar.—FLATS.—A site in Ida-street has been acquired by the Bethnal Green and East London Housing Association, Ltd., 21, Old Ford-road, E.2, for the erection of a block of model flats, in the near future. The association's architect is Mr. MacGregor, 20, Buckingham-street, W.C.2.

South Croydon.—PAVILION.—The governors of the Whitgift Grammar School are to build a new sports pavilion, fives court, etc. A contract has been placed with Messrs. E. H. Smith (Croydon), Ltd., 48, Wellesley-road, Croydon. The architects are Messrs. J. M. Sheppard and Partners, 38, Bedford-place, W.C.1.

Southgate.—BUILDINGS.—The Metropolitan Water Board are to carry out extensions to the Fortis Green pumping station. £20,000 are to be expended on buildings and £20,000 upon additional mains. Plans will be prepared by the Engineer to the Board, 173, Rosebery-avenue, E.C.

Southwark. — CLUB. — The Quinn-square Club, 6, Quinn-square, S.E.1, are promoting a scheme for the building of club premises in Quinn-square, Waterloo-road, S.E.1, to include a hall to seat about 200 persons, workshops, billiards-room, gymnasium, library-chapel, etc., the cost being estimated at £15,000. No plans have been prepared yet or architect appointed. Arrangements are in the hands of Miss Joyce Harbord.

Stratford.—HOME.—The East London Nursing Association, Wardrobe-chambers, Wardrobe-court, E.C.4, have secured a site in Stainsby-road, E.14, for a home to accommodate about 20 nurses. The cost is estimated at approximately £20,000. The plans have been prepared by Miss W. B. Acworth, M.A., 60, Gower-street, W.C.1. No contracts have been placed yet.

Victoria Docks. — REBUILDING. — The Mission to Seamen, 11, Buckingham-street, W.C., are to rebuild their Institute in Victoria Dock-road, E. Plans are to be prepared by Messrs. Petch and Fermaud, 8, Buckingham Palace-road, S.W.1. The piling contract has been placed with Messrs. John Mowlem and Co., Ltd., Ebury Bridge-road, Victoria, S.W.1.

Wandsworth.—DEPOT.—The L.C.C. recommend £42,500 in respect of the erection of a motor vehicles repair depot on the Camborne-road site, Wandsworth.

Wardour-street.—ALTERATIONS.—M. Pahl, proprietor of the Little Hungary Restaurant, is to commence shortly alterations and improvements, including the installation of a new façade. No contracts have been placed yet. The architect is Mr. Rezso Brosan, Vincent House, Vincent-square, S.W.1.

Wardour-street.—REBUILDING.—The business premises at No. 11 are to be rebuilt to the plans of Mr. H. Kempton Dyson, Jermyn-street, S.W.1. The contractors are Messrs. Kirk and Kirk, Ltd., 287, Upper Richmond-road, Putney, S.W.

Westminster. — REBUILDING. — The City Council has received a letter from Messrs. J. Leaning and Sons, 28, John-street, W.C.1, regarding a rebuilding proposal affecting the premises 18 to 29, Abingdon-street, and submitting for its approval a plan of the proposed building site, which is situate between Abingdon-street, Great College-street, the Abbey-garden and Old Palace-yard.

Woodford. REBUILDING.—The licence of the "Rising Sun" public-house at Woodford New-road, owned by Messrs. Taylor, Walker and Co., Ltd., Limehouse Brewery, E.14, has been renewed, subject to a rebuilding scheme being submitted in the near future. The plans will be prepared by the company's architect.

Wood Green. — HOUSES. — Mr. C. E. Matthews, builder, 1a, Tottenhall-road, N.13, proposes the erection of about 50 houses at Bidwell-gardens.

Wood Green. — SWIMMING BATH. — The U.D.C. proposes the construction of an open-air swimming bath at Durnsford-road, with café and a concert hall. Plans are to be prepared by Mr. E. Prentice Mawson, F.R.I.B.A. (Messrs. T. H. Mawson and Son), of Lancaster and 2, Talbot-square, W.2, and the work will be supervised by the Council's Engineer and Surveyor.

RATES OF WAGES IN THE BUILDING TRADE

AS AND FROM 1st FEBRUARY, 1933.

[Every endeavour is made to ensure accuracy, but we cannot be responsible for errors.]

	Masons.	Bricklayers.	Carpenters Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Labourers.
Aberdare	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Accrington	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Aldershot	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Alfreton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Alnwick	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Altrincham	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Ashford (Kent)	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Ashington	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Ashton-under-Lyne	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Aylsham	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Banbury	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Barnsley	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Barnstaple	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Barrow-in-Furness	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Barry	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Basingstoke	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Bath	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/–
Bedford	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/–
Berwick	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Bexhill	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Birkenhead	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/7½	1/2½
Birmingham	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bishop Auckland	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Blackburn	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Blackpool	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bognor Regis	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Bolton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bournemouth	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/–
Bradford	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bradford-on-Avon	1/2	1/2	1/2	1/2	1/2	1/2	1/1	10½
Braintree	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Brentwood	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Bridgwater	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Bridlington	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Brighton	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/–
Bristol	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bromsgrove	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Bromyard	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	10½
Bungay	1/1	1/1	1/1	1/1	1/1	1/1	1/1	9½
Burnley	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Burton-on-Trent	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bury	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bury St. Edmunds	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Buxton	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Cambridge	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Canterbury	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Cardiff	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Carlisle	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Chatham	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Chelmsford	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Cheltenham	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/–
Chester	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Chesterfield	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Chorley	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Cirencester	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/1½	11
Clacton	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Colchester	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/–
Coventry	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Cranbrook	1/1	1/1	1/1	1/1	1/1	1/1	1/1	9½
Crewe	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Cromer	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Darlington	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Deal	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Denbigh	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/–
Derby	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Devizes	1/2	1/2	1/2	1/2	1/2	1/2	1/1	10½
Dewsbury	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Doncaster	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Dorchester	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/1½	11
Dorking	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Dovercourt	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Driffield	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/–
Droitwich	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Dudley	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Durham	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Eastbourne	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/–
E.Glam. (Mon.Val.)	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Ely	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Exeter	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/3½	1/0½
Exmouth	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Fakenham	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Felixstowe	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/–
Folkestone	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Frome	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/1½	11
Glossop	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Gloucester	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/3½	1/0½
Godalming	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Goole	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Gosport	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/–
Grantham	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/–
Gr. Yarmouth	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Grimsby	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Guildford	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Halifax	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Harpenden	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Harrogate	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Hartlepools	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Harwich	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Hastings	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Hatfield	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/–
Hednesford	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Hereford	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/2½	11½
Herne Bay	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Hertford	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/–
Hitchin	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Hoddesdon	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/–
Holt	1/1	1/1	1/1	1/1	1/1	1/1	1/1	9½
Huddersfield	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Hull	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Hunstanton	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Huntingdon	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Isle of Wight	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Ipswich	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/–
Keighley	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Kettering	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Kidderminster	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
King's Lynn	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Lancaster	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½

	Masons.	Bricklayers.	Carpenters Joiners	Plasterers.	Slaters.	Plumbers.	Painters.	Labourers.
Leamington	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Leeds	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Leicester	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1 5½	1/1½
Leighton Buzzard	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Lichfield	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Lincoln	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Littlehampton	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Liverpool	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/7½	1/2½
Llandudno	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Llanelly	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
London—								
12 m. radius	1/7	1/7	1/7	*	1/7	1/7	1/6	1/2½
12-15 m. radius	1/6½	1/6½	1/6½	*	1/6½	1/6½	1/5½	1/2
Loughborough	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Lowestoft	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Luton	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/–
Macclesfield	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Maidstone	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Malvern	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/–
Manchester	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Mansfield	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Margate	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
MarketHarborough	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/–
Matlock	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/–
Melton Constable	1/1	1/1	1/1	1/1	1/1	1/1	1/1	9½
Melton Mowbray	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Merthyr Tydfil	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Middlesbrough	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Newark	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Newbury	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Newcastle-on-Tyne	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Newcastle-u.-Lyme	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
New Forest	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Newmarket	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Newport, Mon.	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Northampton	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Norwich	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Nottingham	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Nuneaton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Oakham	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/–
Oldham	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Oxford	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Paignton	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Peterborough	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Plymouth	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/4½	1/1½
Pontypridd	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Portsmouth	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/–
Preston	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Ramsgate	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Reading	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Redcar	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Redditch	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Reigate	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Retford	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/–
Ripon	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/–
Rochdale	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Rochester	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Rugby	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Saffron Walden	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
St. Albans	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
St. Helens	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Sawbridgeworth	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Saxmundham	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	10½
Scarborough	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Sevenoaks	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Sheffield	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Shrewsbury	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Sittingbourne	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Southampton	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Southend-on-Sea	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Southport	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
South Shields	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Stevenage	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Stockport	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Stockton-on-Tees	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Stoke-on Trent	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Stourbridge	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Stourport	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Stowmarket	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Stratford-on-Avon	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/–
Stroud	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3	11½
Sunderland	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Swaffham	1/1	1/1	1/1	1/1	1/1	1/1	1/1	9½
Swansea	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Swindon	1/4	1/4	1/4	1/4	1/4	1/4	1/3	1/–
Tamworth	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Taunton	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Thetford	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Torquay	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Totnes	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3	11½
Trowbridge	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/1½	11
Tunbridge Wells	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Uttoxeter	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Wakefield	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Walsall	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Walsden	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Warminster	1/2	1/2	1/2	1/2	1/2	1/2	1/1	10½
Warrington	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Warwick	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Wells (Norfolk)	1/1	1/1	1/1	1/1	1/1	1/1	1/1	9½
Welwyn Gar. City	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
West Bromwich	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Weston-super-Mare	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Weymouth	1/3	1/3	1/3	1/3	1/3	1/3	1/2	11½
Whitby	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Wigan	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Winchester	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Windsor	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/–
Wisbech	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Wolverhampton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Woodbridge	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Worcester	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Worksop	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Worthing	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Wrexham	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Wycombe	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/–
Wymondham	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	10½
York	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½

* The rate recognised by the National Association of Operative Plasterers as and from 1st February, 1933, is 1/7½ per hour.

For Building Trade wages in Scotland, see page 604.

CONTRACTS, COMPETITIONS, &c.

For some contracts still open, but not included in this List, see previous issue. Those with an asterisk are advertised in this number. Certain conditions beyond those given in the following information are imposed in some cases, such as that advertisers do not bind themselves to accept the lowest or any tender, that a fair wages clause shall be observed, that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given is the latest date when the tender, or the names of those willing to submit tenders, may be sent in, the name and address at the end is the person from whom or place where quantities, forms of tender, etc., may be obtained.

Following is a list of abbreviations:—Borough Surveyor, B.S.; Borough Engineer, B.E.; District Surveyor, D.S.; Town Clerk, T.C.; County Engineer, C.E.; County Surveyor, C.S.; Surveyor, S.; Engineer, E.

BUILDING, PAINTING, ELECTRIC LIGHTING, HEATING, etc.

APRIL 10.

Ambleside.—Conveniences.—Erection of underground conveniences at Waterhead Green, for U.D.C. C. L. Gregson, surveyor. Dep. £1 1s.

Bebington and Bromborough.—Housing Schemes.—Erection of (*a*) 12 flats and 2 houses, Mersey Bank estate; (*b*) 56 houses and 8 bungalows, land adjoining Brackpenwood, Higher Bebington, for U.D.C. Engineer and Surveyor, Council Offices, Bebington. Dep. £2 2s.

Biggleswade.—Cottage.—For Biggleswade Joint Hospital Board. F. C. Levitt, architect, Biggleswade.

Birmingham.—Central Fire Station.—City Engineer and Surveyor, The Council House. Dep £10.

Camberwell.—Painting.—Internal painting and decorating work at Newlands and Sunray Housing estates, for the year ending June 30, 1934, for B.C. William Bell, A.M.Inst.C.E., F.S.I., Borough Engineer and Surveyor, Town Hall, Camberwell.

Cellardyke.—Lavatories.—For various trades in connection with public lavatories at East End, Cellardyke, for Kilrenny, Anstruther, Easter and Wester T.C. Burgh's Surveyor's Office, Anstruther. Dep. 10s. (each schedule).

Chorley.—Houses.—Coppull, 12 houses; Mawdesley, 4 houses, for R.D.C. W. Cotterill, S. Dep. £2 2s.

Glasgow.—Painting.—At St. Aloysius' (Springburn) School Annexe, Elmvale-st., Glasgow, N., for the Education Department. Education Offices (Property Department), 129, Bath-st., Glasgow, C.2. Dep. £1 1s.

Glasgow.—Houses.—For various works at Knightswood housing scheme, areas Nos. 1, 2, 3, 9 and 10, for 128 additional houses, for T.C. D. Stenhouse, Town Clerk, City Chambers, Glasgow.

Glasgow.—Painter Work.—At Possil (New) School, Balmore-rd., Glasgow, N., for T.C. Education Offices (Property Department), 129, Bath-st., Glasgow, C.2. Dep. £1 1s.

Glasgow.—Stairway.—At High School, of Glasgow Extension, Holland-st., Glasgow, C.2, for T.C. Education Offices (Property Department), 129, Bath-st., Glasgow, C.1. Dep. £1 1s.

Glasgow.—Houses.—For various works at the Summertown-rd. housing site for the erection of 12 houses, for Corporation. Town Clerk's Office (Room 56).

Hampton.—Repairs, etc.—For repairs and decorative works, etc., for U.D.C. at (a) Public Offices, Hampton, and (b) Sewage Disposal Works, Hanworth-rd., Hampton. S. H. Chambers, surveyor, Public Offices, Hampton, Middlesex.

Haywards Heath.—Building Work.—Extensions to the boiler-house and heater chamber, etc., at the Brighton County Borough Mental Hospital, Haywards Heath, Sussex, for the Visiting Committee. J. H. Rothwell, clerk, Town Hall, Brighton. Dep. £2 2s.

Hendon, N.W.4.—School.—For the B.C. Chairman, Education Committee, Town Hall. Dep. £4 4s.

Kettering.—Centre.—For the erection of a maternity and child welfare centre and ante-natal clinic in British-lane, for U.D.C. Surveyor, 2, Gold-st., Kettering. Dep. £2 2s.

Kingsbury (N.W.9).—Public Convenience.—For the U.D.C. Clerk, Council Offices. Dep. £2 2s.

Leicester.—Schools.—Proposed temporary schools, Wyvern-av., Barkby-lane, and Overton-rd. extension, Tailby estate, for E.C. J. O. Thompson, A.R.I.B.A., S. to E.C., Education Offices, Newarke-st. Dep. £1 1s. each.

Magherafelt.—Alterations.—To shop premises of Co-operative Agricultural Society. R. T. M'Guckin, architect, Garden-st.

Maltby.—Conversion.—Of two privies into w.c.'s and provision of three baths in scullories at Crookhill Hall Receiving Home, near Maltby, Rotherham, for West Riding E.C. West Riding Architect, County Hall, Wakefield.

Manchester.—Sub-station.—Including roadways, foundations, drains, etc., at Wythenshawe, for T.C. H. C. Lamb, Chief Engineer and Manager, Electricity Department, Town Hall. Dep. £1 1s.

Methley.—Extension.—Laying out small extension to Methley Church Graveyard, for Rector and Churchwardens. Chorley, Gribbon & Foggitt, architects, 3, Park-pl., Leeds, 1.

North Berwick.—Bridge.—For the whole work of forming concrete bridge and additional dressing accommodation and cubicles at the swimming pond, for T.C. Andrew Robertson, Burgh Surveyor. Dep. £1.

Rushden.—Building.—Detached hospital building to accommodate fourteen beds and certain alterations to the administrative block at Rushden House Sanatorium, for Northamptonshire C.C. W. A. Millington, Clerk of C.C., County Hall, Northampton.

St. Asaph (Flint).—Council Offices.—And board room on the Upper Denbigh-rd., St. Asaph, for R.D.C. E. O. Evans, Hafod Elwy, St. Asaph. Dep. £3 3s.

***Taunton.**—New County Offices.—Clerk, Ashcombe House, Milton-rd., Weston-super-Mare. Dep. £10 10s.

Tilbury.—Wiring, etc.—For the installation of 45 (tenanted) Council houses with wiring for cookers and electric light with plain pendants, for U.D.C. Electrical Superintendent, Council Offices, Tilbury. Dep. £2 2s.

Wealdstone.—Swimming-bath.—For the construction of an open-air swimming-bath in Christchurch-av., for U.D.C. P. G. May, surveyor, Council Offices, Wealdstone. Dep. £2 2s.

Wednesbury.—Houses.—172 non-parlour type on Park-lane and Myvod-rd. site, for T.C. A. Booth, L.R.I.B.A., B.E. and S. Dep. £2 2s.

APRIL 11.

Ashwell.—Cottages.—Barkway, four; Barley, four; Reed, four; Therfield, four, for R.D.C. J. C. Tickle, architect, 16, Willian Way, Letchworth. Dep. £2 2s.

Belfast.—Pointing.—Raking-out and pointing brickwork, etc., and external painting work, at Carrick House, for C.B. City Surveyor (Architectural Section, Room 91), City Hall.

Bundoran.—Housing.—Twelve houses, for U.D.C. W. J. Doherty, M.R.I.A.I., architect. Dep. £5.

Cottingley.—Installation.—Of low pressure hot water apparatus and electric light at new junior and infants' school, at Cottingley, near Bingley, for West Riding E.C. Education Officer, County Hall, Wakefield.

Coventry.—Houses.—Swift's Corner and Tynford-rd. Housing Director, Council House. Dep. £5 5s.

Dover.—Electricity Offices.—Town Clerk, Brook House. Dep. £2 2s.

Huddersfield.—Painting.—External painting of 1,528 houses and tenements, for T.C. Borough Engineer, 1, Peel-st., Huddersfield.

Kew.—Painting.—For external painting of the building at the Board's Works, West Hall-rd., Kew Gardens, for the Richmond Main Sewerage Board. W. Merrick, clerk, 39, George-st., Richmond, Surrey.

Kingston-upon-Hull.—Houses.—144 non-parlour type, on Endike-ln. estate, for T.C. D. Harvey, A.R.I.B.A., City Architect. Dep. £1 1s.

Liverpool.—Exchange.—Employment Exchange at Garston, for the Commissioners of His Majesty's Works, Room 65d, Third Floor, H.M. Office of Works, London, S.W. Dep. £1.

Mold.—Houses.—For 20 houses at Clay-lane, for U.D.C. F. A. Roberts, architect, Earl-chambs., Mold. Dep. £3 3s.

Plymouth.—Alterations.—To lodge on Plymouth Hoe, for T.C. J. Wibberley, City Engineer and Architect, Sun-bldgs. Dep. £1 1s.

Sheringham.—Conveniences.—Public conveniences on Lifeboat Plain, Sheringham, for U.D.C. F. Hall Smith, Surveyor's Office, Sheringham. Dep. £1 1s.

Tralee.—Building.—125 houses at Cloonmore, for U.D.C. O'G. Tough, Town Surveyor. Dep. £50.

APRIL 12.

Aberystwyth.—House.—House at Figure Four, for R. Jones. A. M. James, architect and surveyor, 6, Princess-st.

Loanhead.—Fencing.—Providing and erecting wood and iron fencing for 60 houses at Kenningtonav. (West) first development. Geo. B. Deas, L.R.I.B.A., Central-chams., Kirkcaldy, Fife.

Welwyn.—Houses.—12, at Woolmer Green housing scheme, and construction of new road, water main, etc. Surveyor to Council, C. B. Borthwick, Council Offices, Welwyn, Herts. Dep. £2 2s.

APRIL 13.

Edinburgh.—Cottages.—Cottage at Talla Reservoir, and also for the erection of a similar cottage at Gourlaw Filters, near Rosewell, for T.C. J. & A. Leslie & Reid, C.E., 29, Waterloo-place, Edinburgh.

Ormskirk.—Conveniences.—In Coronation-pk., for U.D.C. S. Dep. £1 1s.

St. Bees.—Conveniences.—For erection of public conveniences, with the construction of approximately 160 yds. of 6-in. stoneware pipe sewers, near the foreshore, St. Bees, for Whitehaven R.D.C. Engineer's Office, Rural Council-chambs., 81, Lowther-st., Whitehaven. Dep. £1 1s.

Sheffield.—Housing.—120 non-parlour type houses on Woodthorpe estate (Building Scheme No. 3), for T. C. W. Geo. Davies, F.R.I.B.A., City Architect. Dep. £2.

Torquay.—Alterations.—To head post office and telephone exchange, for H.M.O.W. Room 65D, Third Floor, H.M. Office of Works, London, S.W.1. Dep. £1.

APRIL 14.

Dartmouth.—Building.—Farm-house and farm buildings at Rosomzeal, for Raleigh Trustees. R. A. Rogers, L.R.I.B.A., chartered architect, 7, Union-st., Newton Abbot.

APRIL 15.

Coatbridge.—Houses.—120 at Hospital-st., for T.C. A. S. Thom, T.C.

Glasgow.—Building.—Several works in building of farm cottage and alterations to farm buildings at Hazelton-head farm, Mearns, for T.C. D. Stenhouse, T.C.

Inverness.—Houses.—For 24 two-roomed houses in six blocks of four each, for the T.C. A. F. MacKenzie, architect, Town House, Inverness.

Wells.—Rebuilding.—A portion of the Town Hall, etc., for the Corporation. E. P. Foster, Town Clerk, 1, Cathedral Green, Wells, Somerset. Dep. £3 3s.

APRIL 17.

Faversham.—Alterations.—Also additions to Guildhall, for T.C. S. Percy Andrews, B.E. and S., 20, West-st. Dep. £2.

Newport Pagnell.—Houses.—12, for R.D.C. Thomas Castles, surveyor, Council Offices, 7, Station-rd., Newport Pagnell. Dep. £2 2s.

Oswestry.—Houses.—20, on Whitehurst-gdns. site, for Black Park Colliery Co., Ltd. S. Fox-Davies, architect, Memorial Hall, Oswestry. Dep. £2 2s.

APRIL 18.

Ballinasloe.—Housing.—41 two-story dwelling houses, for U.D.C. J. L. Dunne, M.I.M., Cy.E., Town Surveyor, Ballinasloe. Dep. £5 5s.

Boxhill.—Mortuary and Post-mortem Room.—Town Clerk, Town Hall. Dep. £1 1s.

Cashel.—Houses, 66, for the Cashel Urban District Council. Architect, Joseph Connolly, Cashel. Dep. £5 5s.

Palmerstown.—Drainage.—Also concreting work at Palmerstown, for Irish Sailors' and Soldiers' Land Trust, 50/51, Upper Mount-st., Dublin. Secretary. Dep. £1 1s.

Portsmouth.—Building.—Electricity sub-station at Frederick-st., for T.C. Engineer and Manager, Electricity Dept., 111, High-st.

APRIL 19.

Doncaster.—Warehouse.—For (*a*) Warehouse, offices, etc; (*b*) provision of sheet steel piling, for wharf wall; (*c*) diversion of river, for Corporation. R. E. Ford, Estates Surveyor, 3, Priory-place. Dep. £5.

Manchester.—Additions.—Reinforced concrete additions to coal bunkers in No. 2 boiler-house, at Stuart-st. Power Station, for T.C. H. C. Lamb, Chief Engineer and Manager, Electricity Department, Town Hall. Dep. £1 1s.

Offaly.—Church.—Church at Raheen, Offaly, for Rev. L. Byrne, P.P. A. Edward Smith, F.S.I., chartered quantity surveyor, 19, Upper Merrion-st., Dublin. Dep. £3 3s.

Ramsey.—Houses.—Twelve non-parlour type, for U.D.C. V. J. Bateman, S., Great Whyte, Ramsey, Huntingdon. Dep. £2 2s.

APRIL 20.

Cheadle Hulme.—Extensions.—At police station, for Chester C.C. F. Anstead Browne, F.R.I.B.A., County Architect, The Castle, Chester. Dep. £1 1s.

Riccall.—Houses.—16 non-parlour type houses at Barlby, for R.D.C. H. Bell, Barlby-rd., Selby, S. Dep. £1 1s.

West Riding.—Hot Water Supply.—And heating, at Wadsley Mental Hospital, near Sheffield, for W.R. Mental Hospitals Board. W. E. H. Burton, Assoc.M.Inst.C.E., A. and E. to the Board, Wakefield. Dep. £5 5s. (to Chief Financial Officer, W.R.M.H.B. Offices, Wakefield).

APRIL 21.

Norman Cross.—Painting.—Exterior painting of 50 Council houses at Farcet, Yaxley, Holme, Folksworth and Orton Waterville, for R.D.C. H. W. Hawkins, Surveyor's Office, Old Fletton.

APRIL 22.

Cork.—Schools.—New schools for Christian Brothers', at Sullivan's Quay, Cork. R. O'Flynn, B.E., M.R.I.A.I., architect, 60, South Mall. Dep. £10.

Tyldesley-with-Shakerley.—Houses.—80 houses on the Mosley Common site, for U.D.C. F. E. Jones, E. and S., Town Hall, Tyldesley. Dep. £1 1s.

APRIL 24.

Peterborough.—Shop Front.—Modern shop front and also of various shop fittings at premises in Bridge-st. to be used as showroom for the Electricity Dept., for T.C. H. A. Nevill, Electricity Dept. Dep. £1 1s.

APRIL 25.

***Ashtead (Surrey).**—Extension to Telephone Exchange.—For the Commissioners, Room 65D, Third Floor, H.M.O.W., London, S.W.1. Dep. £1.

Bristol.—Additions.—Also alterations to up platform No. 9 (present platform No. 4) at Temple Meads Station, for G.W.R. E., Paddington Station. Dep. £2 2s.

Cosham.—Convenience.—For public convenience at the junction of London-rd. and Northern-rd., Cosham, for Portsmouth T.C. City Engineer, Guildhall, Portsmouth. Dep. £1 1s.

Cosham.—Houses.—For 260 houses (second contract) on the Southampton-rd. site, Cosham, for Portsmouth T.C. R. J. Jenkins, City Engineer, Guildhall, Portsmouth. Dep. £5 5s.

APRIL 26.

***Ilford.**—County Court.—For the Commissioners, Room 65D, Third Floor, H.M.O.W., London, S.W.1. Dep. £1.

London (Clapham).—Flats.—For the erection of 21 flats in North-st., Clapham, S.W.4, for Wandsworth B.C. G. Leonard Elkington, Norfolk House, 7, Laurence Pountney-hill, E.C.4. Dep. £1 1s.

London (Wandsworth).—Flats.—For 52 flats and 6 shops in Frogmore, Wandsworth, for B.C. G. Leonard Elkington, Norfolk House, 7, Laurence Pountney-hill, E.C.4. Dep. £1 1s.

APRIL 27.

***Leamington.**—Alterations to Post Office.—For the Commissioners, Room 65D, Third Floor, H.M.O.W., London, S.W.1. Dep. £1.

NO DATE.

Bath.—Cinema.—At Bath, for Avon Cinema Co., Ltd. W. H. Watkins, F.R.I.B.A., and Morgan Willmott, F.R.I.B.A., joint architects. A. E. Taylor, Secretary, Avon Cinema Co., Ltd., 10, Windsor-place, Cardiff. Dep. £2 2s.

Eardisley (Herts).—Renovation.—Of Presbyterian Church, Great Oak, Eardisley. H. Beddoes.
Ottringham.—Bungalow.—Bailey, Sunk Island-rd., Ottringham.

MATERIALS, etc.

APRIL 10.

Bexhill.—Tarmacadam, etc.—(*a*) 2,000 tons tarmacadam; (*b*) 35,000 gals. dehydrated tar; (*c*) cement; (4) paving slabs; (5) kerbing, for T.C. B.S., Town Hall.
Panteg.—Metalling, Tar, etc..—For U.D.C. S., Council Offices, Pontymoel.
Pontypool.—Metalling, Tar Spraying, etc.—For R.D.C. S., Woodbine House, Usk.

APRIL 12.

Swanscombe.—Supplies.—For U.D.C. Surveyor, L. E. Croucher, Council Offices.

APRIL 15.

Pembury.—Kerbing, etc.—For Tonbridge R.D.C. F. Harris, Pembury-rd. Dep., £1 1s.

APRIL 17.

Ely.—Sewer Pipes.—And tars, for U.D.C. A. E. King, S., Lynn-rd., Ely.

APRIL 19.

Great Yarmouth.—Granite Chippings.—2,000 tons of ¾-in. gauge, for T.C. Borough Engineer, Town Hall, Great Yarmouth.

APRIL 20.

Cairo.—Cement.—For 600 tons Portland cement, for Main Drainage Department. Inspecting Engineer, to the Egyptian Government, 41, Tothill-st., S.W.1. Payment 100 mills.

APRIL 24.

Beckenham.—Tarmacadam.—500 tons, for U.D.C. H. Storr Best, S., Town Hall. Dep. £2.

ENGINEERING, IRON AND STEEL.

APRIL 10.

Abertillery.—Retaining Wall.—At Victoria-rd., Six Bells, for U.D.C. Surveyor, King-st. Dep. £5.
Haywards Heath.—Heating.—Extensive apparatus for warming and supply of hot water and steam to main buildings of Mental Hospital, for Brighton C.B. A. H. Barker, consulting engineer, 100, Victoria-st., Westminster, S.W.1. Dep. £5 5s
Somerset.—Footbridge.—For the erection of a masonry-faced reinforced concrete footbridge over the River Brue at Darkey-lane, Bruton, for C.C. County Surveyor's Office, Ashcombe House Annexe, Milton-rd., Weston-super-Mare.

APRIL 11.

Southport.—Pumping Plant.—For provision and erection of three electrically-driven centrifugal pumping sets, each set comprising borehole and surface force pump, capable of pumping 700 gallons per minute against a total head of 475 ft., together with the usual accessories, for Southport and District Water Board (Contract No. 6). C. Burton Ede, M.Inst.C.E., E., 14, Portland-st., Southport. Dep. £3 3s.
Southport.—Pumping Station.—For the provision and erection of a complete pressure filtration plant for the removal of iron and manganese from well water (capacity of plant, 84,000 gallons per hour), for Southport and District Water Board (Contract No. 6). C. Burton Ede, M.Inst.C.E., E., 14, Portland-st., Southport. Dep. £3 3s.

APRIL 12.

Warwickshire.—Widening.—New 8 ft. 6 in. span reinforced concrete box-type bridge over Longbridge brook on Warwick-Stratford-rd., one-third of mile south-west of Longbridge; and demolishing completely existing Gog bridge, situated on Hampton-rd., Warwick, and constructing double box-type reinforced concrete bridge of two 8 ft. 6 in. spans, for C.C. D. H. Brown, C.S., Shire Hall, Warwick. Dep. £2.

APRIL 18.

Chingford.—Extensions.—To sewage disposal works, for U.D.C. S. J. Hellier, E. and S. Dep. £5 5s.

APRIL 19.

Brightlingsea.—Tanks.—Reinforced concrete tanks for purification of oysters, supply pipes, approach road, etc., at Brightlingsea, for U.D.C. Lewis & Lewis, engineers, 15, Victoria-st., Westminster, S.W.1. Dep. £1.
Casablanca.—Cable, etc.—Electric cable and transformer sub-stations at Port of Casablanca. Dept. of Overseas Trade, 35, Old Queen-st., S.W.1. (Ref. A.X. 11733.)
New Sarum.—Waterworks.—Reinforced concrete reservoir, together with fencing and other ancillary works, at Camp Hill, near Salisbury, for T.C. H. V. Overfield, City E. Dep. £5 5s.
Sheppey.—Drainage.—3,780 lin. yds. of stoneware pipe sewers ranging from 12 in. to 6 in. dia., about 170 lin. yds. of cast-iron pipe sewers 7 in. dia., and about 220 lin. yds. of steel pipe sewers 12 in. and 9 in. dia., together with manholes, detritus tanks, settling tank, storm tanks, filters, humus tank, sludge drying beds, and other incidental works, at Minster-in-Sheppey, for R.D.C. F. W. S. Stanton, E., 5, Victoria-st., Westminster, S.W.1. Dep. £5.

APRIL 20.

Eyemouth.—Groyne.—Steelwork groyne on foreshore, for Harbour Trust, Eyemouth. Henderson & Nicol, chartered civil engineers, 21, Bridge-st., Aberdeen.
Johannesburg.—Conductors.—For 20 miles of 19.083 and 10 miles of 37.083 black double-braided cable with copper conductors, for City Council. Dept., Overseas Trade, 35, Old Queen-street, S.W.1. (Ref. A.X. 11730).
Johannesburg.—Transformer Plant.—The 1,000 k.w. 3-phase A. to D. current converter, for Johannesburg C.C. Dept. C., Overseas Trade, Old Queen-street, S.W.1. (Ref. A.X. 11727).

ROAD, SEWERAGE AND WATER WORKS.

APRIL 10.

Bognor Regis.—Surface Dressing.—Of carriageways within the district, for U.D.C. J. Draper, Assoc.M.Inst.C.E., Town Hall, Bognor Regis.
Hull.—Widening.—Of Cottingham-rd. from Hall-rd. to city boundary with tarmacadam carriageway (5,500 sq. yds.), for T.C. City Engineer's Office, Guildhall, Hull.
Prestatyn.—Private Street Works.—Making-up of roads, for U.D.C. S. Trevor Roberts, M.Inst.M. and Cy.E., Municipal Offices, Prestatyn. Dep. £2 2s.
Southampton.—Street Works.—For private street works in various roads, for T.C. Borough Engineer's Office, Civic Centre, Southampton. Dep. £2 12s. 6d.

APRIL 11.

Bebington.—Tarspraying, etc.—For tarspraying and works of repair to drives and walks of Bebington Cemetery, for Burial Board. Superintendent, Bebington Cemetery, Town-lane, Rock Ferry.
Leeds.—Reconstruction, etc.—For reconstruction of portions of tramway tracks, for Corporation: Excavating, concreting, etc. (labour only)—(*a*) Vicar-lane (Kirkgate to Hartley-hill); (*b*) Neville-st. and Great Wilson-st. (Sovereign-st. to Hunslet-lane); (*c*) Beeston-rd. and Town-st. (near Cross Flatts Park to Wesley-st). Also surfacing of tramway tracks with granited rock asphalt—(*d*) Vicar-lane (Kirkgate to Hartley-hill); (*e*) Neville-st. and Great Wilson-st. (Sovereign-st. to Hunslet-lane). Also for painting of exterior of tramways and transport department's head offices in Swinegate. W. V. Morland, general manager and engineer, 1, Swinegate, Leeds. Dep. £1 1s. (each tender).

APRIL 12.

Romford.—Surface Dressing.—With "Spramex" of approximately 430,000 yds. of main and district roads and footways, for U.D.C. F. G. Beaumont, E. and S., 110, Market-place, Romford.

APRIL 13.

Twickenham.—Widening, etc.—Of Kneller-rd., for T.C. G. R. King, Borough Engineer and Surveyor, Municipal Offices. Dep. £1 1s.

APRIL 15.

Kent.—Roads.—For the surfacing with asphalt, two-coat work, 3in. in thickness, of about 30,000 sq. yds. of concrete carriageway on the Harrietsham By-Pass and the Lenham By-Pass, for C.C. H. T. Chapman, County Surveyor, County Surveyor's Office, St. Peter's-st., Maidstone.

APRIL 19.

Preston.—Surfacing.—For provision and laying of 500,000 sq. yds. of asphalt surfacing (Liverpool—E. Lancs rd), for Lancs C.C. H. Swire, Wellesley House, Newton-le-Willows, Lancs.
South Mimms.—Making-up.—Also sewering of Darkes-close (approximate length, 140 yds.), at Potters Bar, for R.D.C. S. Dep. £1.

TRADE NEWS

Appointments.

We are informed that Mr. D. F. Potter, who has had over thirty years' experience as a traveller in the hardwood trade, has now joined the staff of Messrs. S. M. Barr, importers of foreign hardwoods, of 49, Lime-street, E.C.3.

Messrs. Ruston and Hornsby, Ltd., engineers, of Lincoln, inform us that Mr. J. A. Walker, who has been responsible for the publicity, has severed his connection with the firm. They have appointed Mr. W. H. Temple, until recently in the publicity department of the Agricultural and General Engineers and formerly with Messrs. Aveling and Porter, Ltd., of Rochester, as head of the publicity department. Mr. Temple will be taking up duty about the middle of April.

Netherne Mental Hospital, Coulsdon, Surrey.

We regret that in our description of this work in our last issue, the fire-escape stairs were wrongly credited. These were supplied by Messrs. F. A. Norris and Co., Ltd., of 11-12, St. Andrew's-hill, E.C.4.

Stone Restoration.

The contract department of Szerelmey, Ltd., 273-277, Rotherhithe New-road, London, S.E.16, are carrying out the restoration of the stonework by their synthetic stone process at St. Francis R.C. Church, Maidstone.

Dissolution of Partnership.

The partnership under which the Gloucestershire building firm of Messrs. Collins and Godfrey, of Tewkesbury and Cheltenham, has in recent years been carried on has been terminated, and in future the business will be carried on by Mr. F. W. Godfrey, under the same name and at the same address as hitherto.

Building Society Branch Office.

The Woolwich Equitable Building Society, of 97, High-street, Maidstone, have opened, from the above address, a sub-office at 29a, High-street, Gillingham. The Maidstone branch will continue to supervise the business of the society in the Kent area.

Changes of Address.

The Sal-Ferricite and Trading Co., Ltd., have removed to 119, Victoria-street, S.W.1 (telephones Victoria 3224-3225), where orders for Sal-Ferricite, the metallic hardener and waterproofer for concrete floors, walls, etc., will receive the usual careful attention.

Messrs. Rentokil, Ltd., have now moved to larger premises at Rentokil House, 171, Bermondsey-street, S.E.1. Their telephone number is Hop. 5450.

A Contract for British Engineers.

Messrs. Braithwaite and Co. (Engineers), Ltd., of Westminster, announce that a contract has been awarded to their associated company in India for the construction of a double-track railway bridge across the Nerbudda River, 200 miles north of Bombay. The bridge, which will be 4,600 ft. long, contains over 13,000 tons of steel, and owing to the nature of the river bed the foundations will be carried down to great depths, necessitating some 2,000 ft. of well-sinking. The work, which will cost £400,000, will be completed in thirty months.

Squash Rackets Courts.

Messrs. Cafferata and Co., Ltd., of Newark-upon-Trent, write as follows: "We note with interest on page 385 of *The Builder* for March 3 some notes on squash rackets courts. With regard to the plastering of these courts we would like to mention that we have evolved a special type of plaster for this work, which exactly fulfils the needs of courts of this description, and a good number have been treated according to this specification with absolute success. This specification was followed in a court erected for Sir Henry Birkin, and also one for Sir Archibald Langman, to give but two instances."

CURRENT & PROPOSED BUILDING WORK*

Abbreviations: T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; B.C. for Borough Council; P.C. for Parish Council; M.H. for Ministry of Health; M.T. for Ministry of Transport; C.B. for County Borough; B. of E. for Board of Education; M.W.B. for Metropolitan Water Board; Borough Surveyor, B.S.; Borough Engineer, B.E.; District Surveyor, D.S.; Clerk, C.; Town Clerk, T.C.; County Engineer, C.E.; County Surveyor, C.S.; Surveyor, S.; Engineer, E.

Aldergrove.—Improvements to aerodrome to be completed by R.A.F. at £14,500.

Antrim.—School to be erected at Moneyrick.

Ballykinlar.—Additional officers' quaters to be erected at military camp by War Office at £3,400.

Barrow-in-Furness.—B.S., W. C. Persey, plans 250 houses for T.C.

Barrow-in-Furness.—T.C. approved: 19 pairs of houses, Ancaster-st., F. Barrow.

Bath.—T.C. passed: Additional classrooms at St. Luke's School, Frome-rd.

Bedford.—Usher & Anthony, architects, 9, St. Paul's-sq., have prepared plans for alterations to premises in Newnham-st. for Charles Wells, Ltd., Horn-lane Brewery, Horn-lane.

Belfast.—J. & R. W. Taggart, Belfast, to undertake housing scheme in Ballysillan-rd. district at approximately £360,000.—Senate of Queen's University instituted centenary building fund for permanent buildings. Cost of chemistry building alone is estimated at £60,000.

Bingley.—U.D.C. proposes 56 houses on Cross-flats. E. O. Robinson, architect.

Birkenhead.—T.C. approved plans prepared by W. M. & M. W. Shennan for the development of 2 and 4, Charlesville, with tenement buildings.

Birmingham.—E.C. propose to build a new elementary school on Castle estate to accommodate 360 boys and 360 girls, estimated at £29,300. Elementary school also proposed in Jervoise-rd. to accommodate 432, estimated at £13,600.

Bishopbriggs.—Lanarkshire C.C. propose the reconstruction of the premises formerly occupied by the Cowlairs Co-operative Society, for new offices at an estimated cost, according to prepared plans, of £300. Mr. John Stewart, architect, Albert-street, Motherwell.

Blackpool.—Gorst & Crabtree, L.R.I.B.A., 7, Birley-st., are architects for garage, shops and flats on Clifton-drive and Squires-gate. Contracts not let.

Blaydon.—Council approved plans submitted on behalf of Norman Barker, Rowlands Gill, for 34 houses at Winlaton Mill.

Bude.—U.D.C. to borrow £1,000 for repairs to Summerleaze swimming pool.

Burnhope.—Durham County E.C. is to seek B.E. sanction to £6,600 new Council school at Burnhope. Plans by F. Willey, F.R.I.B.A., 34, Old Elvet, Durham. Also for £28,000 school at Easington Colliery.

Chelmsford.—T.C. are considering scheme for alterations and improvements to Chelmsford Market.

Chesterfield.—Wilcockson & Cutts, architects, Saltergate, have prepared plan for estate off Langer-lane, for Frank Mower, Grange Wood Farm, to take about 800 houses. Shopping centre proposed.

Cirencester.—Extensions proposed to premises of Mason's & Gilletts, bacon curers, Bowns Farm, Barnsley-rd.

Coventry.—Church hall at Woodside-av., Greenlane. C. Bedgrave, L.R.I.B.A., Barbican-chambs. 35a, Earl-st.

Crewe.—Health Committee proposes in Ludford-st. a maternity and child welfare centre. L. Reeves, S.

Cromer.—Stockdale, Harrison & Sons, St. Martin's East, Leicester, are architects for reconstruction of Overstrand Hall as convalescent home for the Leicester and County Saturday Hospital Society, 3, Welford-rd., Leicester. Estimated cost £6,000.

Darlington.—Hospital in Greenbank-rd. been purchased by B.C. at £16,000 for public health purposes.

Down.—Public elementary schools to be erected by Down Regional E.C. at Kirkcubbin and Portaferry. Castor J. Love, architect, Belfast.

Dronfield.—Governors of Grammar School propose additions to school buildings.

Dudley.—Management of the Guest Hospital propose new ward unit.

Easington Colliery (Co. Durham).—William Grant, builder, Easington, proposes 31 houses at Easington Colliery. J. Hamilton, Hill Crest, Castle Eden, architect.

East Ham.—B.E. submitted estimate amounting to £140 for redecoration work at Harts Sanatorium. —T.C. recommend application for formal consent of M.H. to appropriation of Gooseley-lane site for housing purposes.—Plans passed:—12 houses, 53-75, Gainsborough-av., W. Goodchild & Co.; 20 houses, 194-234, Grantham-rd., G. Siegerte, architects; cinema (Granada), reconstruction of Empire Kinema, Barking-rd., W. E. Trent, architect; 48 houses, 188-280, Walton-rd., J. W. Lohden.

Edinburgh.—For the erection of 12 houses at West Saville-terr., for Adam Currie & Sons, Ltd., Edinburgh. T. Ackman Swan, architect, 7, St. Colne-st., Edinburgh.

Edinburgh.—22 flatted houses are to be erected at 135, Colinton-rd., for Mr. P. M. Macandrew, 6, West End-pl. John Jordan, architect, 12, Castle-st., Edinburgh.

Essex.—E.C. recommend following: Grays, Palmer's Endowed School for boys—alterations and adaptations, £9,983; Dagenham, The Heath, proposed Council senior school—purchase of additional land, £2,300; Grays, open-air school—additional kitchen accommodation, £218; Ongar, proposed Council senior school—fencing of site, £525; Stanford-le-Hope, proposed Council senior school site—fencing, £513; Walton-on-Naze, Council junior school—doorway and porch, office accommodation for staff, £126; Woodford, proposed Council senior school site—iron fencing, £239, close boarded fencing, £350.

Girvan.—Town Council have plans for the erection of houses at the corner of Dalrymple and Wreck Streets. Plans by the Borough Architect.

Glasgow.—A new suite of halls for the Catholic Church is to be erected at Monresa-pl. Thomas Daly, architect, 2, Haggs-cres., Johnstone, Renfrewshire.

Hanwell.—London C.C. recommend £1,120 in respect of adaptation at Hanwell Mental Hospital of (1) detached building for use as accommodation for male nurses, and (2) male staff bedrooms for use for accommodation of male patients.

Helmsley.—R.D.C. approved plans for extensions to Ampleforth College.

Hinckley.—Catholic Authorities propose new schools for St. Peter's, Rev. Benedict White, P.P., St. Peter's Priory.

Kincardine.—C.C. approved 2 blocks of houses at Gourdon at £2,800, and 2 blocks at Johnshaven at £2,600.

Larkhall.—Lanarkshire C.C. have plans in hand for the clearing of the Old Muir-street school and the erection on the site of a new Welfare Centre. Mr. John Stewart, architect, Albert-street, Motherwell.

Leeds.—Central Garage, Ltd., propose works and a service station in Regent-st.

Leicester.—Plans for improvements at three parks been made by Parks Committee. New lodges proposed.

Lincoln.—Plans approved for new inn on Monks-rd. for Mowbray & Co., Ltd., 58, London-rd., Grantham.

Liverpool.—Housing Committee propose further 1,000 houses.

Llanrwst.—R.D.C. received Ministry approval of tender of Wm. Jones, Maelgwyn, Llanrwst, for 11 houses in various parishes.

London (City).—Corporation to lease 104, Lancaster-st. and spend £800 on adaptations.

London (Bermondsey).—L.C.C. recommend borrowing by B.C. of £36,581 for housing purposes within borough.

Long Eaton.—U.D.C. approved:—6 houses, Norfolk-rd. and Beech-av., W. H. Woods.

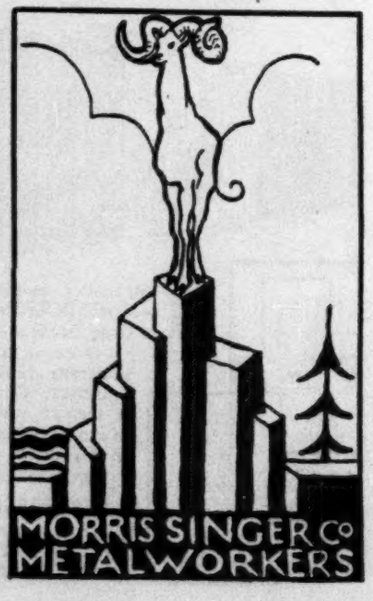
Manchester.—Mr. G. Noel Hill, A.R.I.B.A., City Architect, has prepared plans for 2 shopping centres on the Wythenshawe estate.

Middlesbrough.—Anglo-American Oil Co., Ltd., 36, Queen Anne's-gate, S.W.1, acquired land at Ferry-rd. and Vulcan-st. for new buildings. Plans by Construction Dept. (J. E. Jenkins, superintendent), 36, Queen Anne's-gate, London, S.W.1.

Middlewich.—Earl Bros., builders, Kinderton-st., propose 21 houses on New King-st.

Mirfield.—Walter Tapper, A.R.A., architect, 10, Melina-place, London, N.W.8, plans Community Church at the House of the Resurrection, estimated cost £50,000.

Monaghan.—National school to be built at Backwallace.



Mossley.—A. Deane, builder, 19, Buckley-st., Droylesden, proposes 50 houses on the Waterloo-lane site.

Newcastle-on-Tyne.—Andrews Liver Salt, Ltd., considering erection of new business premises at Gallowgate, Newcastle. Hetherington & Wilson, L.R.I.B.A., 52, Westgate-rd., Newcastle, in conjunction with Cackett, Burns Dick & McKellar, F. & A.R.I.B.A., 21, Ellison-place, Newcastle, architects.

Newton Abbot.—R.D.C. approved:—Lay-out at Kingsteignton for 12 houses and 6 shops, for P. Kerslake.

Northampton.—The T.C. is to continue with the scheme for bathe at Upper Mounts, at a cost of £82,000. M.H. sanction is to be sought. J. C. Prestwick & Son, Bradshawgate-chambs., Leigh, Lancs, are the architects.—T.C. passed: Chowns, Ltd., 4 combined shops and dwelling houses, Highlands estate, Kettering-rd.; P. Phipps & C., Ltd., rebuilding Franklin's Gardens Hotel, Weedon-rd.; P. Phipps & Co., Ltd., reconstruction, "Britannia Inn" p.h., Barrack-rd.

Northumberland.—Aged Miners' Homes Association have secured sites at Seghill and Stakeford for homes. Ten houses each site. Plans by W. Dixon & Son, 1, Collingwood-st., Newcastle-on-Tyne.

Nuneaton.—T.C. approved: G. E. & W. Wincott, 22 houses, Westbury-rd.; E. G. Pallett, 8 houses, Gipsy-lane; Bass, Ratcliff & Gretton, Ltd., alterations and additions to "Heart in Hand," Wheat-st.

Plymouth.—Site for church been secured at St. Budeaux, in parish of Our Most Holy Redeemer, Keyham, of which Canon W. S. Gaynor is parish priest.

Pontypool.—U.D.C. appointed committee to consider provision of proper bus centre.—It was also decided to have scheme prepared for 20 houses as instalment of 100 new houses.

Portsmouth.—Plans for extension of Portsmouth Cathedral been prepared by Sir Charles Nicholson, who designed alteration of parish church of Portsmouth for purposes of Cathedral. Cost of extension is estimated at £70,000.

Preston.—T.C. to invite tenders for 99 houses at Ribbleton.

Reigate.—R.D.C. approved:—C. D. Wellicome, Redhill, 22 houses, Brighton-rd., Horley; G. J. Arthur & Sons, houses, Middle-st., Brockham; S. F. Farley, houses, Brockham-lane, Betchworth; Barclays Bank, Ltd., bank premises, Victoria-rd., Horley; Vicar and Churchwardens, in respect of additions to St. Bartholomew's Church, Horley; Sutton and District Electricity Supply, transformer, near to Warren-drive, Kingswood; Surrey Standing Joint Committee, cottage for police purposes, Babylon-lane, Kingswood.

Ripon.—The T.C. is to clear the Queen Heads Yard area.

Rochdale.—E.C. are to invite tenders for new girls' school on Greenhill to cost £30,000. H. Morgan, B.E., Town Hall.

Rochester.—Plans passed:—4 houses, Arthur-rd., and 10 houses, City-way, C. J. Howard; house, store and garage, City-way, H. Giles; 10 houses, Cambridge-rd., and 12 shops, Patten's-lane, Rochester Land Co., Ltd.

Salford.—Health Committee propose block of flats in Eccles New-rd. on old workhouse site.

Skegness.—For 19 houses with garages at Seacroft, tenders are invited by the Skegness Development Co. Tenders to John Wills & Son, The Hall.

Slough.—U.D.C. approved:—34 houses, Tuns-lane and Cippenham-lane, Salt Hill Estates, Ltd.; houses in Stoke-rd., E. J. Maslin & J. Woodham; 8 houses, Shaggy Calf-lane, H. H. Harrison; 8 flats, Carlisle-rd., E. Bishop.

South Shields.—T.C. propose 142 houses for aged people at Quarry-lane at £31,869. Tenders to be invited. J. P. Watson, B.E., Town Hall.

Stafford.—Montague Burton, Ltd., tailors, Hudson-rd. Mills, Leeds, propose three shops in Goalgate-st. Plans by own architects.

Stanley (Co. Durham).—The M.H. has sanctioned 150 houses at South Stanley for U.D.C. by direct labour under A. Routledge, S.

Stirling.—Town Council have plans prepared by the Borough Surveyor for 52 additional houses at Linden-av.

Stockton-on-Tees.—Plans have been prepared by G. P. Stainsby, 25, High-st., for extensions to the premises of F. Newman & Son, Dovecote-st. Café premises are also to be modernised.

Sunderland.—Plans by W. & T. R. Milburn, 17, Fawcett-st., Sunderland, have been approved for alterations to "Wheateheaf Hotel" for Messrs. Higginbottom. No contracts let.

Twickenham.—Plans passed by T.C.:—G. Whittaker, block of 12 flats, London-rd.; Hilbery Chaplin, Ltd., 186 houses, Nelson-rd.; H. M. Grellier & Son, 12 houses, Crane-way, and 12 at Warren-rd.; Bierrum & Partners, block of shops and flats, Heath-rd.; Thames Photographic Co., Ltd., photographic works, Winchester-rd.; C. H. Palmer, factory office, 96, Second Cross-rd.; G. & C. Lugg, extension of dining-room, 7, Orford-gardens.

Tunbridge Wells.—Nurses' home at the new Kent and Sussex Hospital, Cecil Burns, architect, Stone Lodge, Vale-av., Tunbridge Wells. Building will be constructed in reinforced concrete with Truscan floors to details by Truseed Concrete Steel Co., Ltd.

Wallasey.—Hotel premises to be built on site in Grove-rd., for John Davenport & Son, Ltd., brewers, 77, Bath-row, Birmingham.

Warrington.—Marks & Spencer, Ltd., Baker-st., W.1, propose stores in Sankey-st.

West Ham.—T.C. approved: Sub-station, Burnham-st., sub-station, Pinchin, Johnson & Co.'s premises, Hartmann-rd., and sub-station, New Dock-rd., opposite Crawford-st. depot, for Electricity Department.

Worcestershire.—C.C. propose 21 police cottages in various parts of the county and a police station and cells at Bewdley, including recreation rooms, etc., cost £13,000.

*See also List of Contracts, Competitions, etc.

***** In these lists every care is taken to ensure that information given is accurate and up to date, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works at the time of publication have been actually commenced.

PRICES CURRENT OF MATERIALS.*

Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by enquiry

[PRINCIPAL CHANGES OF THE WEEK.—Lead—Sheet, Pipe in Coils and Old Lead—drops by 10s. per ton.]

BRICKS, &c.

Per 1,000 Alongside, in River Thames, up to London Bridge. £ s. d.

Best Stocks 4 3 6
Second Hard Stocks 3 18 6

Per 1,000. Delivered at London Goods Stations.

	£ s. d.		£ s. d.
"Phorpres"	2 11 3	Flettons, B'lin'se	3 6 3
Flettons at King's Cross ..	2 11 3	Best Blue Pressed Staffs	9 5 0
Do., grooved for Plaster	2 13 3	Do. Bullnose ..	9 15 0
		Blue Wire Cuts	7 5 0

White Midhurst Facing Bricks (delivered London site) 5 0 0
"Phorpres" Whites (do.) 3 17 3
"Phorpres" Rustic Facing Bricks, delivered Central London ..... per 1,000 3 12 3

Best Stourbridge Fire Brick :—

2½ in.	8 11 0	3 in.	10 3 0

GLAZED BRICKS—

Best White Ivory and Salt Glazed Stretcher	21 0 0	D'ble Str'tch'rs	29 10 0
		D'ble Headers	26 10 0
Headers	20 10 0	One side and two Ends ..	30 10 0
Quoins, Bullnose and 4½ in. Splays and Squints	27 10 0	Two Sides and one End ..	31 10 0
			28 0 0
Flats			

Second Quality, £1 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours. Hard Glaze, £5 10s. extra over white.

PARTITION SLABS.

Delivered London Area.

CLINKER CONCRETE.

2" per yd. sup. ..	1 6	3" per yd. sup.	2 0
2½" ,, ,, ..	1 8	4" ,, ,, ...	2 4

CRANHAM TERRA COTTA.

2" per yd. sup. ..	3 3	3" per yd. sup.	3 10
2½" ,, ,, ..	3 7	4" ,, ,, ...	4 4

HEMPSTEAD—KEYED TWO SIDES.

2" per yd. sup. ..	3 3	3" per yd. sup.	3 9
2½" ,, ,, ..	3 6	4" ,, ,, ...	4 3

	s. d.	
Thames Ballast	6 6 per yd.	delivered 2 miles radius Paddington.
Pit Ballast	5 6 ,, ,,	
Pit Sand	7 0 ,, ,,	
Washed Sand	7 6 ,, ,,	
¾ in. Shingle	6 6 ,, ,,	
¾ in. Broken Brick	10 6 ,, ,,	
Pan Breeze	7 6 ,, ,,	

CEMENT.

Per ton delivered in London area in full van loads.

Best Portland Cement. British Standard Specification. Test	
In Jute Sacks (11 to ton)	£2 4 9
In Paper Bags (20 to ton)	2 6 0
Colorcrete No. 1 & 2 Coloured Rapid Hardening Portland Cement in 1 cwt. paper bags free (non-returnable) 20/- per ton above Portland Cement Price.	
"Snowcrete" White Portland Cement in 1 cwt. paper bags free (non-returnable) 190/- per ton.	
Alongside Vauxhall in 80 Ton Lots	
Jute Sacks (11 to ton)	1 17 9
Paper Bags (20 to ton)	1 19 0
Ferrocrete per ton extra on above	0 7 6
Vitrocrete per ton extra on above	0 7 6

NOTE.—Jute Sacks are charged 1s. 6d. each and credited 1s. 6d. each nett if returned in good condition within three months, carriage paid.

Super Cement (Waterproof) Paper Bags free	3 16 0
Roman Cement	6 15 0
Parian Cement	5 15 0
Keene's Cement, White	5 15 0
,, ,, Pink	5 10 0

PLASTER.

Plaster, Coarse, Pink	3 0 0
,, ,, White	3 12 6
,, Fine	4 12 0
Strapite, Coarse	3 9 0
,, Finish	3 17 0
Grey Stone Lime	2 5 0
Chalk Lime	2 5 0
Best Ground Blue Lias Lime	1 17 6
Hair ..... per cwt.	2 2 6
Granite Chippings	1 12 0

NOTE.—Sacks are charged 1s. 9d. each and credited 1s. 6d., if returned in good condition within three months carr. pd.

Stourbridge Fireclay in sacks 37s. 0d. per ton at rly. dep.

STONE.

	s. d.
BATH STONE.—Delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube....	2 10
BEER STONE—RANDOM BLOCK—	
Free on rail at Seaton Station, per ft. cube..	2 3
Delivered free on rail Nine Elms, S.R. per ft., cube	3 1½
Selected approximate size one way, 1d. per cubic foot extra ; selected approximately three sizes or for special work, 3d. per cubic foot extra.	
PORTLAND STONE—	
Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, S. Rly., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R., per ft. cube	4 4½
Do. do. delivered on road waggons at above stations, per ft. cube	4 5½
White basebed, 3d. per ft. cube extra.	
NOTE.—1d. per ft. cube extra for every foot over 20 ft. *average*, and ½d. beyond 30 ft.	
HOPTON-WOOD STONE—	
F.O.R. Quarries, Wirksworth, Derbyshire,	s. d.
Random blocks from 10 ft. and over P.ft.cb.	14 0
Sawn two sides.....	22 6
Sawn, three or four sides.....	27 6
CHILMARK—RANDOM BLOCK—	s. d.
At Nine Elms, per ft. cube	3 11
YORK STONE, BLUE—*Robin Hood Quality.* Delivered at any Goods Station London.	
6 in. sawn two sides landings to sizes (under 30 ft. super).....Per ft. super	5 6
6 in. rubbed two sides, ditto ..... ,,	6 0
3 in. sawn two sides slabs (random sizes) ,,	2 3½
2 in. to 2½ in. sawn one side slabs (ransom sizes) ..... ,,	1 6½
1½ in. to 2 in. ditto ..... ,,	1 3½
HARD YORK—	
Delivered at any Goods Station, London.	
Scappled random blocks .....Per ft. cube	6 3
6 in. sawn two sides landing to sizes (under 40 ft. super) .....Per ft. super	5 1½
6 in. rubbed two sides, ditto .... ,,	6 1½
4 in. sawn two sides slabs (random sizes) ,,	3 1½
3 in. ditto ditto ,,	2 8
2 in. self-faced random flags....Per yd. super	8 0

CAST STONE.

Delivered in London area in full van loads, per ft. cube : Plain, 8s. 6d. ; Moulded, 9s. 6d. ; Cills, 10s. 0d.

SOFT WOOD.

GOOD BUILDING DEAL.

Inches.	Per stan.	Inches.	Per stan.
4 × 11	£23 10	3 × 6.....	£17 10
4 × 9	22 10	3 × 11.....	19 10
4 × 8	21 0	2 × 11.....	19 10
4 × 7	19 0	3 × 9.....	19 10
3 × 8	18 0	2½ × 9.....	19 10
3 × 7	18 0	3 × 4½.....	17 10
2½ × 7	18 0	3 × 4.....	17 10

PLANED BOARDS.

1 × 11	£22 10	1 × 9.....	£21 0

PLAIN EDGE FLOORING.

Inches.	per sq.	Inches.	per sq.
⅝	16/-	1½	25/-
¾	17/-	1¼	27/6
1	20/-		

TONGUED AND GROOVED FLOORING.		MATCHING (BEST).	
Inches.	per sq.	Inches.	per sq.
1	21/-	⅝.....	16/-
1½	26/-	¾.....	18/6
1¼	27/6	1.....	22/6
ins. BATTENS.	s. d.	SAWN LATHS.	s. d.
¼ × 2 ..per 100 ft.	2 6	Per bundle	2 3

HARD WOOD.

1 INCH AND UP THICK.

Average price for prime quality	£ s. d.
Dry Austrian Wainscot, per ft. cube.....	0 15 0
Dry American and/or Japanese Figured Oak, per ft. cube	0 12 0
Dry American and/or Japanese plain Oak, per ft. cube	0 10 0
Dry sq. edged Honduras Mahogany, per ft. cube	0 14 0
Dry log-cut Honduras Mahogany, per ft. cube	0 16 0
Dry Cuba Mahogany, per ft. cube	1 1 0
Dry Teak, per ft. cube	0 14 0
Dry American Whitewood, per ft. cube	0 10 0
Best Scotch Glue, per cwt.	3 0 0
Liquid Glue, per cwt.....	4 7 0 to 5 10 0

SLATES.

First quality, slates from Bangor or Portmadoc carriage paid in full truck loads to London Rate Station. Per 1,000 actual.

	£ s. d.		£ s. d.
24 by 12	25 0 0	18 by 10 ..	15 12 6
22 by 12	25 0 0	18 by 9 ..	13 15 0
22 by 11	22 10 0	16 by 10 ..	13 10 0
20 by 12	22 0 0	16 by 8 ..	10 7 6
20 by 10	19 7 6		

TILES.

Delivered at London rate stations in full truck loads of not less than 6 tons. Per 1,000 f.o.r. London.

Best machine-made tiles from Broseley or Staffordshire district	£4 7 0
ditto hand-made ditto	5 0 0
Ornamental ditto	5 8 6
Hip and valley tiles (per dozen) { Hand-made	0 9 6
{ Machine-made	0 9 0

METALS.

JOISTS, GIRDERS, &c., TO LONDON STATION, PER TON—

R.S. Joists, cut and fitted	£11 0 0
Plain Compound Girders	12 0 0
,, Stanchions	15 0 0
In Roof Work	18 0 0

MILD STEEL ROUNDS.—To London Station, per ton.

Diameter.	£ s. d.	Diameter.	£ s. d.
½ in.	12 0 0	⅝ in. to ⅞ in.	10 15 0
⅝ in.	11 0 0	1 in. to 2½ in.	10 10 0

WROUGHT-IRON TUBES AND FITTINGS—

(Discount off List for lot of not less than £7 net value delivered direct from Works, 2½ per cent. less above gross discounts, carriage forward, if sent from London Stocks.)

	Standard Wrot. Mild Steel Tubes and Tubulars ⅛in. to 6in.	Genuine Wrot. (Puddled) Iron Tubes and Tubulars ⅛in. to 6in.	Standard Fittings ⅛in to 6in.	Standard Flanges ⅛in. to 6in.
	%	%	%	%
Gas	65	52½	57½	70
Water ..	61½	48½	52½	65
Steam ..	57½	45	47½	60
Galv. gas	52½	40	47½	60
Galv. water	47½	35	42½	55
Galv. steam	42½	30	37½	50

C.I. HALF-ROUND GUTTERS—London Price ex Works.

Per yd. in 6 ft. lengths.	Gutters.	Angles and Nozzles.	Stop Ends.
3 in.	11d.	1/5	5d.
3½ in.	11½d.	1/7	5d.
4 in.	1/0½	1/9	5d.
4½ in.	1/1½	2/-	6d.
5 in.	1/5	2/2	8d.

O.G. GUTTERS.

3 in.	1/1	1/11	5d.
3½ in.	1/2	1/11	5d.
4 in.	1/2½	2/-	5d.
4½ in.	1/4	2/4	6d.
5 in.	1/6½	2/8	8d.

RAIN WATER PIPES, &c.

Per yd. in 6 fts.	Pipe.	Bends, stock Branches. angles, stock angles.
2 in.	1/3½	1/9 2/7
2½ in.	1/4½	2/- 3/1
3 in.	1/8½	2/6 3/9
3½ in.	2/1½	3/- 4/4
4 in.	2/5	3/7 5/3

Connections—50 per cent. off above prices.
Tonnage allowance—4 ton lots, 5 per cent.
2 ton lots, 2½ per cent.

L.C.C. COATED SOIL PIPES—London Prices ex Works.

	Pipe, angles, stock angles.	Bends, stock Branches.	
	s. d.	s. d.	s. d.
2 in. per yd. in 6 fts.	2 0	1 6½	1 10½
2½ in. ,,	2 4	1 8½	2 4
3 in. ,,	2 6	1 10½	2 9½
3½ in. ,,	2 8	2 4	3 3
4 in. ,,	3 1	2 7½	3 9

L.C.C. COATED DRAIN PIPES—London Prices ex Works.

	Pipe, angles, stock angles.	Bends, stock Branches.	
	s. d.	s. d.	s. d.
3 in. per yd. in 9 ft. lengths	3 10	4 3	7 0
cwt. qr. lbs.			
4 in. ,, 1 1 20 ..	5 2	5 0	8 9
5 in. ,, 1 2 22 ..	6 3	8 9	15 0
6 in. ,, 2 0 6 ..	7 3	10 3	18 0

Gaskin for jointing 41/- per cwt.

	Per ton in London.					
	£	s.	d.	£	s.	d.
IRON—						
Common bars	10	0	0	to 10	10	0
Staffordshire Crown Bars— Good merchant quality ..	10	10	0	to 11	0	0
Staffordshire Marked Bars.....	14	0	0	.. 15	0	0
Mild Steel Bars	9	0	0	.. 10	0	0
Steel Bars, Ferro-Concrete quality, basis price	8	0	0	.. 9	0	0
Hoop iron, basis price	11	0	0	.. 12	0	0
,, Galvanised	27	0	0	.. 28	0	0
Soft Steel Sheets, Black—						
Ordinary sizes, to 20 g.....	11	0	0	.. 11	10	0
,, ,, ,, 24 g.....	12	0	0	.. 13	0	0
,, ,, ,, 26 g.....	14	0	0	.. 15	0	0
Sheets Flat Best Soft Steel, C.R. and C.A. quality—						
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	13	0	0	.. 14	0	0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 22 g. and 24 g.	14	0	0	.. 15	0	0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 26 g.	17	0	0	.. 18	0	0
No. 1 quality £4 per ton extra.						
Flat and Galvanised Corrugated Sheets—						
Ordinary sizes, 6 ft. to 9 ft. to 20 g.	13	0	0	.. 14	0	0
Ordinary sizes, 6 ft. to 9 ft. to 22 g. and 24 g. ..	14	10	0	.. 15	10	0
Ordinary sizes, 6 ft. to 9 ft. to 26 g.	16	0	0	.. 17	0	0
Sheets, Galvanised Flat, Best quality—						
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	16	10	0	.. 17	10	0
Best Soft Steel Sheets, 22 g. and 24 g.	18	10	0	.. 20	10	0
Best Soft Steel Sheets, 26 g.	20	0	0	.. 21	10	0
Cut Nails, 3 in. to 6 in.....	15	0	0	.. 16	0	0
(Under 3 in. usual trade extras.)						

METAL WINDOWS.—Standard sizes, suitable for complete houses, including all fittings, painting two coats, and delivery to job, average price about 1s. 4d. to 1s. 7d. per foot super.

COPPER.

	s. d
Seamless Copper tubes (basis).....per lb.	0 9
Strong sheet ..... ,,	0 10
Thin ..... ,,	0 11
Copper nails ..... ,,	1 0
Copper wire ..... ,,	0 11

PLUMBERS' BRASS WORK.

Delivered in London.

NEW RIVER PATTERN SCREW DOWN BIB COCKS FOR IRON.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
29/-	45/-	76/-	153/-	246/-	510/- per doz.

NEW RIVER PATTERN SCREW DOWN STOP COCKS AND UNIONS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
41/6	62/-	92/-	174/-	300/-	588/- per doz.

* The information given on this page has been specially compiled for THE BUILDER, and is copyright. The aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. **Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.**

PRICES CURRENT OF MATERIALS—(*contd.*).

RIVER PATTERN SCREW DOWN MAIN FERRULES.

½ in.	¾ in.	1 in.
30/-	60/-	116/6 per doz.

CAPS AND SCREWS.

1¼ in.	1½ in.	2 in.	3 in.	3½ in.	4 in.
7/6	10/-	14/-	23/-	30/-	42/- per doz.

DOUBLE NUT BOILER SCREWS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
7/6	11/-	17/-	23/-	36/-	63/- per doz.

BRASS SLEEVES.

1¼ in.	2 in.	3 in.	3½ in.	4 in.
10/-	12/-	20/-	24/-	31/- per doz.

NEW RIVER PATTERN CROYDON BALL VALVES S.F.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.
35/-	54/-	96/-	162/-	228/- per doz.

DRAWN LEAD P. & S. TRAPS WITH GRASS CLEANING SCREW.

	1¼ in.	1½ in.	2 in.	3 in.
3 lbs. P. traps	33/-	41/-	56/-	101/- per doz.
3 lbs. S. traps	35/-	45/-	66/-	126/- ,,

TIN.—English Ingots, 1/8 per lb. SOLDER.—Plumber's 9d., Tinmen's 10d., Blowpipe 11d. per lb.

LEAD, &c.

(Delivered in London.)	£	s.	d.
LEAD—Sheet, English, 4 lb. and up	19	0	0
Pipe in coils	16	0	0
Soil pipe	23	0	0
Compo pipe	23	10	0

NOTE.—Country delivery, 20s. per ton extra; lots under 3 cwt. 4s. per cwt. extra, and over 3 cwt. and under 5 cwt., 2s. 6d. per cwt. extra. Cut to sizes 4s. cwt. extra.

Old lead, ex London area, at Mills ..... per ton £9 10 0

PAINTS, &c.

		£	s.	d.
Raw Linseed Oil, in pipes	per gallon	0	1	9
,, ,, ,, in barrels	,,	0	1	11
,, ,, ,, in drums	,,	0	2	2
Boiled ,, ,, in barrels	,,	0	2	3
,, ,, ,, in drums	,,	0	2	5
Turpentine, in barrels	,,	0	5	6
,, in drums (10 galls.)	,,	0	5	8
Genuine Ground English White Lead, per ton (In not less than 5-cwt. casks.)		45	0	0

Extra for 1-cwt. kegs over 5-cwt. casks is 5/9 cwt.

GENUINE WHITE LEAD PAINT.

"Father Thames," "Nine Elms," "Park," "Supremus," "St. Paul's," "Morganwyte," "Polacco," "J" Brand, and other best brands (in 14-lb. tins) not less than 5-cwt. lots per ton delivered £ 63 s. 0 d. 0

Red Lead, Dry (packages extra) .. per ton	34	0	0
Best Linseed Oil Putty ..... per cwt.	0	13	6
Stee. XD quality ..... ftn.	0	3	0

VARNISHES, &c.

		Per gallon.		
Oak Varnish	Outside	0	14	0
Fine ditto	ditto	0	16	0
Fine Copal	ditto	0	18	0
Pale Copal	ditto	1	0	0
Pale Copal Carriage	ditto	1	4	0
Best ditto	ditto	1	12	0
Floor Varnish	Inside	0	18	0
Fine Pale Paper	ditto	0	18	0
Fine Copal Cabinet	ditto	1	2	0
Fine Copal Flatting	ditto	1	0	0
Hard Drying Oak	ditto	0	18	6
Fine Hard Drying Oak	ditto	0	19	6
Fine Copal Varnish	ditto	1	0	0
Pale ditto	ditto	1	12	6
Best ditto	ditto	1	2	6
Best Japan Gold Size		0	12	0
Best Black Japan		0	10	0
Oak and Mahogany Stain (water)		0	12	6
Brunswick Black		0	7	0
Berlin Black		0	14	0
Knotting (patent)		1	5	0
French and Brush Polish		0	17	0
Liquid Dryers in Terebene		0	9	0
Culross Black Enamel		0	7	0

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.

Per ft.		Per ft
15 oz. fourths .. 2½d.	32 oz. fourths	6d.
15 ,, thirds .. 2½d.	32 ,, thirds	8d.
21 ,, fourths .. 3½d.	Obscured Sheet, 15 oz.	3d.
21 ,, thirds .. 3½d.	,, ,, 21 oz.	4½d.
26 ,, fourths .. 4d.	Fluted, 15 oz. 6½d., 21 oz.	9d.
26 ,, thirds .. 5½d.	Em'ld, 15 oz. 4½d., 21 oz.	5½d.

Extra price according to size and substance for squares cut from stock.

ENGLISH ROLLED plate in CRATES OF STOCK SIZES.

	Per ft.
Rolled plate ¼ in.	4½d.
Rough rolled ¼ in.	5½d.
Rough rolled ½ in.	5½d.
Figured, Rolled, Baltic, Oceanic, Arctic, Stippolyte, and small and large Flemish White	5½d.
Ditto, tinted	8d.
Rolled Sheet	4½d.
White Rolled Cathedral	4½d.
Tinted do.	6½d.

Cast plate is same price as rough rolled.

"VITA" GLASS.	Per foot. s.	d
Clear sheet—not exceeding 1 foot	1	0
Do. do. 2 feet	1	3
Do. over 2 feet	1	9
Polished plate—not exceeding 1 foot	1	6
Do. not exceeding 2 feet	3	0
Cathedral—not exceeding 1 foot	1	0
Do. larger sizes	1	6
Horticultural Sheet and Cathedral "Vita" Glass. Sizes up to 24 inches by 18 inches or not exceeding 3 feet	1	0
3/16 in. Wired Georgian Design. Sizes up to 106 inches long by up to 24 inches wide	2	

NEW BUILDINGS IN SCOTLAND

Coatbridge.—HOUSES.—The T.C. are inviting tenders for the erection of 120 houses at Hospital-street.

Dundee.—HOUSES.—Plans before the Works Committee of the Town Council are as follows: Corso-street and Tait's-lane, billiards saloon for William Graham, architect, Joseph Johnston, 32, Bank-street; Dalgleish-road, tomato house for Robert McArthur, architects, Gordon and Scrymgeour, 7, Ward-road; Nethergate and Union-street, alterations for Royal Hotel (Dundee), Ltd., and George Spence, architects, Bruce, Son and Morton, 10, Whitehall-street; South-road, additions for Charles Brand, architect, Nelson T. Stewart, 119, Nethergate.

Edinburgh.—BUILDING.—The second section of St. Leonard's Improvement Scheme forms the subject of a report to be submitted at a meeting of Edinburgh Public Health Committee. The report, which is by the City Architect, states that the new tenements are planned with a recess on the west side of the Pleasance, and the shops would occupy the whole of this recess and of the Pleasance frontage. The scheme provides 104 houses and 26 shops.

Greenock.—BUILDINGS.—Plans have been passed by the Greenock Dean of Guild Court for the rebuilding of Greenbank Church Hall. Mr. John Anderson is to build three shops in the Belville-street new housing area.

Motherwell.—RECONSTRUCTION.—Plans have been prepared for the reconstruction of the old Wishaw Police Office at £3,500 at Library headquarters. Mr. John Stewart, architect, Albert-street, Motherwell.

Shotts.—BAKERY.—A bakery is proposed at Shotts Kirk-road, to plans by Messrs. Campbell and McIntosh, Shotts Kirk-road, Shotts.

Shotts.—HALL.—A reconstruction scheme is to be carried out on the hall at Dykehead Cross, by the Dykehead Loyal Orange Lodge.

Import Duties Advisory Committee.

The Import Duties Advisory Committee give notice of the following applications:—For an increase in the import duty on: (a) Paper and board, whether coated or otherwise treated, or not, of a substance of over 90 lb. to the ream of 480 sheets D.C., including strawboard, fibre board, millboard, wallboard, leather board, tube board, shoe board, press board, roofing and flooring papers, insulating boards and various other boards, but not including paper or board which forms part of another article. (b) Marble on which any process other than sawing has been carried out, except tiles, no side of which exceeds 2 ft. in length, mosaic cubes and chippings. Any representations which interested parties may desire to make in regard to these applications should be addressed in writing to the Secretary, Import Duties Advisory Committee, Caxton House (West Block), Tothill-street, London, S.W.1, not later than April 20.

NEW CINEMAS

Ashton-under-Lyne.—A local syndicate has acquired the "Pavilion House," Old-street, which they propose to adapt as a picture house and public hall.

Bath.—Tenders are invited for the erection of a super cinema at Bath for the Avon Cinema Co., Ltd., under the direction of the joint architects, Mr. W. H. Watkins, F.R.I.B.A., 1, Clare-street, Bristol, and Mr. Morgan Willmott, F.R.I.B.A., 27, Park-place, Cardiff. Bills of quantities will be issued upon application. Each application must be accompanied by a deposit of two guineas. Applications to be addressed to Mr. A. E. Taylor, secretary, Avon Cinema Co., Ltd., 10, Windsor-place, Cardiff.

Cobham.—The Epsom R.D.C. have approved sketch plans for the erection of a cinema near the White Lion Hotel, Cobham. Mr. Bertie Crewe, 75, Shaftesbury-avenue, is the architect.

Derby.—The Provincial Cinematograph Theatres, Ltd., New Gallery House, Regent-street, W.1, have acquired a site in London-road for the erection of a super-cinema to seat 2,000 people. The scheme is in its early stages. The company's architect is Mr. William E. Trent, F.R.I.B.A.

Didcot.—Messrs. W. E. Cullen and Sons, the Coronet Cinema, have acquired an adjacent site for the erection of a new cinema. Plans are now being prepared by Mr. A. B. West, F.R.I.B.A., The Knowle, Abingdon, Berks.

Maidstone.—The T.C. has approved plans for the erection of the proposed cinema to be erected on part of the site of the old Lower Brewery, in Lower Stone-street. It will seat 2,000, and is for Bernstein Theatres, Ltd. Mr. Cecil Masey, F.R.I.B.A., 15, Caroline-place, W.C.1, is the architect. Tenders will shortly be invited.

Maryport.—A site in Stenhouse-street has been acquired for a new cinema. Plans are by Mr. T. Nicholson, 47, John-street, Workington.

Nottingham.—The Capitol Cinema (Sherwood), Ltd., propose the erection of a cinema on Mansfield-road, Sherwood. Plans have been prepared by Mr. Alfred J. Thraves, F.R.I.B.A., Whitefriars House, Friar-lane, Nottingham. The estimated cost is £11,000. Plans include for two shops with lounge and billiard hall over. Contracts are not placed.

Rawtenstall.—Messrs. Hall Bros. (Entertainments), Ltd., propose to modernise and reseat the interior of the Palace Theatre.

Sheffield.—Shiregreen Cinema Syndicate, Ltd., have secured a site in Beck-road for the erection of a cinema. The architects are Messrs. C. B. Malam Wilson and Gardham, Campo-chambers, 30, Campo-lane, Sheffield. The scheme provides for an up-to-date cinema with billiards hall and dance hall. The plans are in preliminary stage.

Strabane.—The U.D.C. have approved plans for the erection of a new cinema in Main-street, for Mr. H. F. Cooper, Strabane.

BUILDING TRADE WAGES IN SCOTLAND*

Following are grade rates authorised by the Scottish N.J.C. for Building Industry. The bricklayers in the Glasgow district have ½d. per hour extra. Painters, by ruling of the Scottish National Painters' and Decorators' Joint Council, have from January 1 new rates. Grade A towns, 1/6 per hour; Grade B, 1/5; Grade C, 1/4; Aberdeen has a special rate of 1/5½. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur.

Grade Classifications ...	A	A¹	A²	A³	B	B¹	B²	B³
Craftsmen	1/6	1/6	1/5½	1/5	1/4½	1/4	1/3½	1/3
Labourers	1/2	1/1½	1/1½	1/0½	1/0½	1/-	/11½	/11½

Aberdeen	A	Dundee	A	Hawick	A²	Perth	A
Airdrie	A	Dunfermline	A	Helensburgh	A	Perthshire	A
Alexandria	A	Dunoon	A	Inverness	B	Peterhead	A
Arbroath	A²	East Lothian	A	Kilmarnock	A	Renfrewshire	A
Ayrshire	A	Edinburgh	A	Kincardineshire	A²	Rothesay	A
Bathgate	A	Falkirk	A	Kinross-shire	A	Roxburghshire	A²
Bo'ness	A	Forfarshire	A²	Kirkcaldy	A	St. Andrews	A
Broughty Ferry	A	Fort William	A	Lanarkshire	A	Selkirkshire	A
Clackmannanshire	A	Galashiels	A²	Leith	A	Stirling	A²
Coatbridge	A	Glasgow	A	Midlothian	A	Stirlingshire, West	A
Dumbartonshire	A	Greenock	A	Motherwell	A	West Lothian	A
Dumfries	A²	Hamilton	A	Peeblesshire	A²	Wishaw	A
Dumfriesshire	A²						

* The information given in this table is copyright. The rates of wages in various towns in England and Wales are given on page 599

CURRENT PRICES FOR BUILDING WORK IN LONDON*

EXCAVATOR.

		s.	d.
Digging and throwing or wheeling and filling carts, and carting away to shoot—6 ft. deep	per yard cube	8	9
Add if in clay	" "	1	0
Add for every additional depth of 6 ft.	" "	0	6
Planking and strutting to trenches	per foot super	0	3
Do. to sides of excavation, including shoring	" "	1	0

CONCRETOR.

		s.	d.
Portland cement concrete in foundations 1 to 6	per yard cube	24	3
Add if in underpinning in short lengths	" "	5	6
Add if in floors 6 in. thick	" "	2	3
Add if in beams	" "	2	9
Add if aggregate 1 : 2 : 4	" "	9	0
Add for hoisting not exceeding 10 ft. beyond the first 10 ft.	" "	2	0

BRICKLAYER.

		£	s.	d.
Reduced brickwork in lime mortar and Fletton bricks	per rod	27	0	0
Add if in stocks	"	7	0	0
Add if in Staffordshire blues	"	22	0	0
Add if in Portland cement and sand	"	1	5	0

FACINGS.

Extra for facing in English or Flemish bond for every 10s. per 1,000 over the price of the common bricks	per ft. super	0	0	1½

POINTING

Neat flat struck or weathered joint	" "	0	0	3

ARCHES.

Extra only to the price of ordinary brickwork :—				
Fair external in half brick rings	" "	0	0	10
Axed in stocks	" "	0	0	9
Rubbed and gauged jointed in putty camber or segmental	" "	0	6	0

SUNDRIES.

Damp course in double course of slates breaking joint and bedded in Portland cement	" "	0	0	11
Setting ordinary register grates and stoves	each	1	0	0
Setting kitchener, including forming flues, &c., with all necessary fire bricks	"	4	15	0

ASPHALTER.

		s.	d.
Half-inch horizontal damp course	per yard super	4	6
Three-quarter-inch vertical damp course	" "	9	6
Three-quarter-inch on flats in two thicknesses	" "	6	0
Angle fillet	per foot run	0	3
Skirting and fillet 6 in. high	" "	1	0

MASON.

York stone templates fixed	per foot cube	12	9	
York stone sills fixed	" "	22	0	
Bath stone and all labour fixed	" "	10	6	
Beer stone and all labour fixed	" "	15	0	
Portland stone fixed	" "	17	6	
Chilmark stone fixed complete	" "	16	6	

SLATER.

Welsh 16in. × 8 in. 3 in. lap. including nails	per square	72	9	
Do. 20 in × 10 in. Do. Do.	"	80	9	
Do. 24in. × 12in. Do. Do.	"	90	0	

CARPENTER AND JOINER.

Fir framed in plates	per foot cube	4	0	
Do. joists	" "	4	6	
Do. roofs, floors and partitions	" "	5	0	
Do. trusses	" "	7	3	

	¾"	1"	1¼"	2"
Deal rough close boarding per sq.	30/-	35/-	43/-	70/-

Flat centering for concrete floor, including struts or hangers "		50	0	
Do. to beams	per ft. sup.	0	9	
Centre for arches	"	1	6	
Gutter boards and bearers	"	1	0	

FLOORING.	¾"	1"	1¼"	1½"
Deal-edges shot per sq.	—	38/-	45/-	52/-
Do. tongued and grooved "	—	43/-	50/-	58/-
Do. matchings "	40/-	45/-	—	—
Moulded skirtings, including backings and grounds per ft. sup.	1/4	1/7	1/9	2/3

SASHES AND FRAMES.		s.	d.
One-and-a-half moulded sashes or casements	per foot super	1	10
Two Do. Do. Do.	" "	2	1
Add for fitting and fixing	" "	0	3
Deal cased frames with 1 in. inner and outer linings, 1½ in. pulley stiles tongued to linings, hard wood sills with 2in. moulded sashes in squares, double hung, double hung with pulleys, lines and weights, average size		3	6

DOORS.	1½"	1¾"	2"
Two-panel square framed per ft. sup.	2/1	2/3	2/5
Four-panel Do. "	2/4	2/6	2/9
Two-panel moulded both sides "	2/6	2/9	2/11
Four-panel Do. Do. "	2/9	2/11	3/2

CARPENTER AND JOINER—continued.

FRAMES.

		s.	d.
Deal wrot moulded and rebated	per foot cube	12	6

	1"	1½"	1¾"
Plain deal jamb linings framed per ft. sup.	1/7	1/8	1/11
Deal shelves and bearers "	1/2	1/4	1/7
Add if cross-tongued "	2d.	2d.	2d.

STAIRCASES.

	1"	1¼"	1½"	2"	2¼"
Deal treads and risers in and including rough brackets	2/1	2/4	2/9	—	—
Deal strings wrot on both sides and framed	1/8	2/-	2/2	2/8	—

		s.	d.
Housings for steps and risers	each	0	11
Deal balusters, 1 in. x 1¼ in.	per ft. run	0	9
Mahogany handrail, average 3 in. x 3 in.	" "	6	0
Add if ramped	" "	12	0
Add if wreathed	" "	24	0

FIXING ONLY IRONMONGERY (INCLUDING SCREWS).

6 in. barrel bolts	8½d.	Rim locks	2/-
Sash fasteners	11½d.	Mortice locks	4/6
Casement fasteners	1/5	Patent spring hinges and letting into floor and making good	19/-
Casement stays	1/2		
Cupboard locks	1/5		

FOUNDER AND SMITH.

		s.	d.
Rolled steel joists	per cwt.	15	0
Plain compound girders	"	18	0
Do. stanchions	"	20	9
In roofwork	"	26	6

RAIN-WATER GOODS.

	3"	4"	5"	6"
Half-round plain rebated joints ft. run	1/-	1/1	1/3	1/6
Ogee Do. Do. "	1/2	1/3	1/9	2/3
Rain-water pipes with ears "	1/3	1/10	—	—
Extra for shoes and bends each	2/9	3/11	—	—
Do. stopped ends "	1/1	1/4	1/9	2/6
Do. nozzles for inlets "	2/2	2/7	3/7	4/-

PLUMBER.

		s.	d.
Milled lead and laying in flashings and gutters	per cwt.	38	0
Do. do. flats	"	37	0
Extra labour and solder in coated cesspools	each	6	9
Welt joint	per ft. run	0	6
Soldered seam	" "	1	3
Copper nailing	" "	0	3

	½"	¾"	1"	1½"	2"	4"
Drawn lead waste perft. run	11½	1/4	1/6½	2/5	2/8	—
Do. service "	1/3	1/9	2/-	3/-	—	—
Do. soil "	—	—	—	—	—	5/9
Bends in lead pipe each	—	—	—	—	2/6	6/-
Soldered stop ends "	0/9	1/1	1/6	2/3	2/10	—
Red lead joints "	0/10	0/11	1/2	1/9	2/1	4/3
Wiped soldered joints "	2/3	2/9	3/0	3/10	4/10	6/9
Lead traps and cleaning screws "	—	—	—	10/6	14/-	—
Bib cocks and joints "	6/4	9/7	14/-	—	—	—
Stop cocks and joints "	12/4	14/2	20/8	54/-	—	—

PLASTERER.

			s.	d.
Render, float and set in lime and hair	per yard sup.		2	0
Do. Do. Sirapite	" "		2	3
Do. Do. Keen's	" "		3	0
Add saw lathing	" "		1	4
Add metal lathing	" "		2	4
(Not including hangers or runners, etc., for suspended ceilings.)				
Portland cement screed	" "		2	2
Do. plain face	" "		3	3
Mouldings in plaster	per 1 girth		0	1
One-and-a-half granolithic pavings	per yard sup.		5	3½

GLAZIER.

		s.	d.
21-oz. sheet plain	per foot sup.	0	6½
26-oz. Do.	" "	0	7½
Obscured sheet	" "	0	8
¼-in. rolled plate	"	0	9
¼-in. rough rolled or cast plate	" "	0	10
¼-in. wired cast plate	" "	1	1

PAINTER.

		s.	d.
Preparing and distempering, 2 coats	per yard sup.	0	9
Knotting and priming	" "	0	7
Plain painting, 1 coat	" "	0	9
Do. 2 coats	" "	1	2
Do. 3 coats	" "	1	9
Do. 4 coats	" "	2	4
Graining	" "	2	3
Varnishing twice	" "	1	9
Sizing	" "	0	3
Flatting	" "	0	7
Enamel	" "	1	1
Wax polishing	per foot sup.	0	6
French polishing	" "	1	2
Preparing for and hanging paper	per piece	2/-	to 4/-

*These prices apply to *new buildings only*. They cover superintendence by foreman and carry a profit of 10% on the prime cost without establishment charges. A percentage of 1½ should be added for Employers Liability and National Health and Unemployment Acts, and from 1s. 6d. per £100 for Fire Insurance. The whole of the information given on this page is copyright.

TENDERS

EASTER HOLIDAYS.

Owing to the Easter Holidays, "The Builder" for next week will be published on Thursday, April 13. Copy for publication in that issue should reach this office by first post Tuesday morning.

Communications for insertion under this heading should be addressed to "The Editor," and must reach him not later than Monday evening.

* Denotes *accepted*.
† Denotes *provisionally accepted*.
‡ Denotes *recommended for acceptance*.
§ Denotes *accepted subject to modifications*.
¶ Denotes *accepted by H.M. Office of Works and H.M. War Office*.

Aberdeen.—Extensions to the Daviot branch of the Aberdeen Royal Mental Hospital. Messrs. G. Bennett, Mitchell & Son, architects, West Craibstone-street :—

Mason work—*G. Duncan & Son, Inverurie.
Carpenter work—*A. Hall & Son, Aberdeen.
Slater work—*C. McDonald & Sons, Dyce.
Plaster work—*A. C. Marsden, Bradford.
Plumber work—*J. Laing & Sons, Inverurie.
Fireplaces—J. Scott & Son (Abdn.), Ltd., Aberdeen.
Painter and glazier work—*W. Ross, Inverurie.
Electric work — *Lowdon Bros., & Co., Ltd., Dundee.
Fireproof floors—*J. Scott & Son (Abdn.), Ltd., Aberdeen.
Steel windows—*H. Hope & Sons, Ltd., Smethwick.

Abergele.—For reconditioning the Ysgeirallt Farm House, for the Manchester Corporation :—

*Isaac Roberts & Son, Abergele.

Bantry.—8 working class houses, for the U.D.C. :—

*O'Sullivan, Bantry £2,153 10 5

Belfast.—Repairs and alterations to Workman Memorial public elementary school, for the E.C. :—

*M'Intyre Bros., Ltd., Belfast.

Bideford.—For the erection of new hospital, for the Bideford and District Joint Isolation Hospital Committee :—

*Building & Public Works Construction Co., Ltd., Swindon £14,609

Birmingham.—6 shops at the junction of Westley-road and Warwick-road, Acocks Green. Messrs. Jack Cotton, surveyors, 35, Waterloo-street :—

*B. Whitehouse, Ltd., 247, Monument-road, Birmingham.

Birmingham.—Extensions in Newhall-street, for Messrs. M. Mole & Son, Ltd., 51, Charlotte-street :—

*E. Lancelot Turner, St. Vincent-street, Ladywood, Birmingham.

Birmingham.—For the construction of part of power-house and annexes and superstructure of pump-house at Coleshill Works, for Birmingham Tame and Rea District Drainage Board. Mr. H. C. Whitehead, engineer to the Board, Rookery-park, Erdington :—

*F. & H. Judd, Birmingham £3,736

Bolton.—For 12 bungalows on Moorfield housing estate, for the Corporation. Mr. C. H. Walker, F.S.I., Housing Director, Westminster Bank-chambers, Old Hall-street North, Bolton :—

‡Wm. Townson & Sons, Ltd., Park Hill-street, Bolton £2,880

Bolton.—For the erection of 43 houses off Gibbon-street and construction of roads and sewers :—

†William Townson & Sons, Ltd., Bolton £14,906

Bradford.—For structural alterations to premises, 1064 to 1066 Lees-road, Laisterdyke, for branch offices, for the Halifax Building Society, Commercial-street, Halifax. Mr. G. E. Hinchliffe, architect, Tower-chambers, Silver-street, Halifax :—

*E. Fearnley & Sons, Ltd., Bradford.

Brighouse.—For a building for aged men in Lane Head recreation ground, Halifax, for the T.C. Borough Engineer :—

Mason work—*L. Cockcroft & Sons, Lorwood-Green, near Halifax.
Plasterer—*H. Castle & Son, Hudderafield-road, Brighouse.
Slater—*H. Castle & Son, Hudderafield-road, Brighouse.
Painter — *J. Barber & Sons, 4, Lord-street, Halifax.
Plumber—*H. Cliffe, Bradford-road, Brighouse.
Joiner—*E. Lapish, Mill-lane, Brighouse.

Bristol.—Residence at St. Anne's-park. Mr. W. L. Andrews, F.R.S.A., architect, Meare Green, Stoke St. Gregory, near Taunton :—

*H. T. Cave, Cotham, Bristol.
(Not as stated in our last issue.)

Burnside.—For 12 bungalows on the Fishescoates Estate :—

*The Fishescoates Building Co., Ltd., George-square, Glasgow.

Carluke.—Lanarkshire C.C. has sanctioned the repair of old roads at £1,030, and lay-out of recreation ground at Overtown, at estimated cost of £1,000. Mr. William Chapman, D.S.A., county road engineer, Hamilton :—

*Lanarkshire County Roads Department.

Caxton.—Four houses in each of the parishes of Arrington, Bourn and Little Gransden, for the R.D.C. :—

	Per house.
Arrington—	
*R. & H. Wale	£278 15
Bourn—	
*Hale & Son, Sutton	266 15
Little Gransden—	
*R. & H. Wale	273 15

Chellaston.—For new conveniences at Council School, for the Derbyshire E.C. Mr. G. H. Widdows, County Architect, County Offices, Derby :—

‡H. Heath, Melbourne.

Chelmsford.—For the erection of the new library, for the T.C. Mr. R. A. Cordingley, A.R.I.B.A., architect :—

R. H. Currie (trading as W. J. Wade & Co.), Chelmsford	£33,316
Baker & Sons, Danbury	30,754
John Thompson & Sons, Ltd., Peterborough	29,944
J. Sumner & Co., Southend	29,500
W. E. Wisbey, Chelmsford	29,000
G. J. Hawkes & Sons, Chelmsford ...	28,800
J. Youngs & Son, Ltd., Norwich	28,787
T. J. Bailey, Chelmsford	28,375
Welwyn Builders, Ltd., Welwyn Garden City	28,350
Chas. Foster & Sons, Loughton	28,348
R. Ginn & Son, Hertford	28,288
S. E. Moss & Sons, Chelmsford	28,270
Evans & Nunn, Ltd., Clacton	28,025
V. G. Selwood & Co., Chelmsford	27,898
W. J. Simms, Sons & Cooke, Ltd., Nottingham	27,894
G. E. Wallis & Sons, Ltd., Maidstone	27,892
Trigg & Moore, Chelmsford	27,872
F. J. French, Chelmsford	27,596
Arthur J. Arnold, Chelmsford	27,559
Henry Potter, Chelmsford	27,387
F. Hutton & Son, Colchester	27,299
H. M. Nowell, Ltd., Enfield	26,998
J. C. Pryke & Sons, Chelmsford	26,865
E. D. Winn & Co., Ltd., Knightsbridge	26,622
*Ashford Builders Co., Ltd., Ashford, Middlesex	26,394

(Architect's estimate: £27,712.)

Chelmsford.—For a new engine-house at Sandford Mill Waterworks, for the T.C. Mr. V. J. Willis, Borough Engineer and Surveyor :—

*A. G. Wicks, Braintree, Essex ... £875 11 9

Corbridge.—For extensions to the Charlotte Straker Cottage Hospital, for the Board of Management. Messrs. Dixon & Son, architects, 1, Collingwood-street, Newcastle-on-Tyne :—

*M. Hogarth & Sons, Corbridge-on-Tyne.

Crowborough.—For extensions to the Cottage Hospital :—

*Connor Bros. £3,787

Crumlin (Co. Dublin).—New R.C. church. Messrs. Ashlin & Coleman, architects, Dublin :—

*Murphy Bros., Rathmines £16,000

Denton.—For the erection of 82 houses, for the U.D.C. Mr. Cooke, surveyor, Town Hall :—

*J. B. Catlow & Sons, Ltd.
*John Clayton & Sons.
*David Turner & Sons.
(All of Denton.)

Deptford.—For the construction of dampcoursing at 31, Wickham-road, for the B.C. :—

*J. T. High, 37, New Oxford-street, W.C. £145

Dewsbury.—Three blocks of six dwellings each at Daw Green, for the T.C. Mr. T. Blakeley, A.R.I.B.A., Borough Architect and Surveyor. Quantities by the Borough Architect :—

Bricklayer and mason—*H. Oldroyd, Ossett.
Carpenter and joiner—*J. Richardson & Sons, Staincliffe.
Slater—*G. Fawcett & Sons, Dewsbury.
Plumber and glazier—*A. Scott, Dewsbury.
Plasterer—*J. Gill, Batley.
Painter—*E. Whittleston, Dewsbury.

Dorking.—Open-air swimming pool at the Upper Farm Tea-gardens estate, Boxhill :—

*H. C. Burbidge, 46, Westernville-gardens, Ilford.
Reinforced concrete work—*Trussed Concrete Steel Co., Ltd.

Dukinfield.—For structural alterations to the "Minder's Arms" public-house, Astley-street, for Wilson's Brewery Co., Ltd., Newton Heath Brewery, Monsall-road, Newton Heath. Messrs. W. Johnson & Sons, architects, 27, Oldham-road, Miles Platting, Manchester :—

*Swallow & Taylor, Ashton-under-Lyne.

Durham.—For 37 houses at Pittington, for the R.D.C. Mr. J. N. Adams, Surveyor to the Council, Byland Lodge, Durham :—

*G. M. Pearson, Durham £12,650

Durham.—For alterations to the "William IV." Inn. Messrs. Cowe & Lawson, architects, Central-chambers, Chester-le-street :—

*G. Gradon & Sons, North-road, Sawmills, Durham.

East Pilton.—124 houses at Pilton-drive, East Pilton. Mr. Stewart Kaye, architect, 14, Hill-street, Edinburgh :—

*MacTaggart & Mickel, Ltd., 65, Bath-street, Glasgow.

Edinburgh.—For 24 houses at Craigentinny-road, and 41 houses at Vandeleur-avenue :—

*James Miller, 88, Hanover-street, Edinburgh.

Edinburgh.—For 28 houses at Stevenson-avenue. Mr. C. E. Tweedie & Sons, architects, 54, Frederick-street, Edinburgh :—

*Carleton Henry Dunlop, 44, Frederick-street, Edinburgh.

Edinburgh.—Six dwelling-houses to be erected at junction of Craigintinny-crescent and Moira-terrace. Mr. P. R. McLarne, architect, St. Andrew's-square, Edinburgh :—

*John A. McLaren, Regent-terrace, Edinburgh.

Egham.—2 semi-detached cottages in Denham-road, for the U.D.C. Engineer and Surveyor :—

*Cain & Co., Hounslow £610

Fleetwood.—For the erection of Infants' School, to be known as the "Shakespeare School," at junction of Manor and Mersey-roads, with accommodation for 328 scholars, for Lancashire E.C. Mr. Stephen Wilkinson, F.R.I.B.A., County Architect, 16, Ribblesdale-place, Preston :—

*T. Croft & Sons, Ltd., Preston £10,470

Glasgow.—For the development of Kilmardinny House and grounds by the erection of 100 houses of between £1,000 and £2,000 each :—

*John McDonald (Contractors), Ltd., Burnside, Rutherglen, Glasgow.

Glasgow.—For 160 houses on new housing site at Newlands. Messrs. Whyte & Galloway, architects, 121, Bath-street, Glasgow :—

*Alexander McLellan & Co., Ltd., 44, King-street, Pollockshaws, Glasgow.

Greenford.—For a steel sheet pile wall at bridge over Grand Union Canal, near Greenford Station, for the G.W.R. Mr. R. Carpmael, Chief Engineer, Paddington Station :—

*London Construction Co., Broadway-chambers, Hammersmith, W.6.

Guildford.—New concrete roads and 9-in. and 6-in. sewers on the Boxgrove House estate :—

*R. O. Garrard, West Byfleet.

Invergordon.—Bathing pool :—

*W. Tawse, Ltd., Aberdeen.

Isleworth.—Additions to the Green School, Busch-corner, for the Middlesex C.C. Mr. W. T. Curtis, F.R.I.B.A., County Architect, 10, Gt. George-street, Westminster, S.W.1 :—

W. J. Dickens, Ealing	£23,968
L. & W. Whitehead, Ltd., Clapham	23,571
A. & B. Hanson, Ltd., Southall	23,390
Y. J. Lovell & Son, Gerrards Cross	23,258
‡W. S. Try, Cowley	23,115

Kingstown.—Houses at Granite Hall :—

*Robinson & Keefe, Dublin.

Langport.—For semi-detached villas at Sandpit's-hill. Mr. W. L. Andrews, F.R.S.A., architect, Stoke St. Gregory, Taunton :—

*Hayes, Small & N. Glover, Langport.

Leeds.—For erection of new tailoring factory at Kirkstall-road, for Messrs. Prices Tailors, Ltd. Messrs. Moore & Crabtree, architects, Queensgate, Bradford :—

*Wm. Irwin & Co., Ltd.

¶London.—Tenders accepted by H.M.O.W. for the week ended March 30 :—

H.M. Office of Works, Liverpool—alterations—Tysons (Contractors), Ltd., Dryden-street, Liverpool.
Mossley (Manchester) Post Office and Telephone Exchange—erection—C. H. Godfrey & Son, Bowling-road, Gorton, Manchester.
National Gallery, Tate Gallery and Hertford House—floor polishing—Vertigan & Co., Ltd., 7, Ebury-street, Victoria, S.W.1.
Automatic Tube Installation Room, General Post Office, W.—construction—Hall, Beddall & Co., Ltd., Pitfield Wharf, Waterloo Bridge, S.E.1.
Great Yarmouth—maintenance—R. H. Carter & Son, Ltd., Anson-road, South Town, Great Yarmouth.
Ullet-road Branch Post Office, Liverpool—improvements—Collin & Son, Ltd., 7, Vauxhall-road, Liverpool.
Customs and Excise, Royal Albert Dock—new office—A. Bedford, 19, Melbourne-parade, Palmers Green, N.13.
Southend-on-Sea—maintenance—J. C. Flaxman & Sons, 114, Southchurch-road, Southend-on-Sea.
Preston Employment Exchange—demolition—Roneo, Ltd., Peel Hall-street, Joinery Works, Preston.

¶London.—The following works contracts have been placed by the War Office during the week ended March 30 :—

Barry and Buddon, Angus—road repairs—H. V. Smith & Co., Ltd., Edinburgh.
Ballykinlar—cookhouse block—Hy. Laverty & Sons (Belfast), Ltd., Belfast.

London.—Repairs, etc., to the roofs of the Underground conveniences for men at Farringdon-street (North), Aldgate and Eastcheap :—

Vigor & Co. (Poplar), Ltd.	£311
W. H. Wagstaffe & Sons	229
Holland & Hannen & Cubitts, Ltd. ...	221
W. R. Hargrave & Sons	207
*F. J. Howard	153

London.—Reinforced concrete retaining wall along the Pymme's Brook frontage to the Metal Box Company's factory. Mr. S. N. Cooke, F.R.I.B.A., architect, Sun-buildings, Bennett's-hill, Birmingham :—

*Trussed Concrete Steel Co., Ltd.

London.—Extension of the nursery accommodation at Islington Infirmary, for the L.C.C.:—

		Empire grown timber.
Robertson & Charles, Ltd.	£1,897	£1,897
C. P. Roberts & Co., Ltd.	1,748	1,748
Whitbys, Ltd.	1,674	1,674
John C. Mather & Son	1,405	1,405
Thomas Cole (Barnsbury), Ltd.	1,393	1,393
Pate, Ltd.	1,393	1,379
J. & C. Bowyer, Ltd.	1,337	1,337
W. E. Silk	1,320	1,320
*George Keetch & Son, Ltd., De Beauvoir-road, N.1 (Architect's estimate: £1,331.)	1,253	1,253

Lydney.—For the erection of a church at Primrose Hill with accommodation for 300 people, for Building Committee. Mr. W. E. Ellery Anderson, architect, Bath Chambers, 1, Bath-street, Cheltenham:—

*Billings & Sons, Ltd., Cheltenham.

Manchester.—For works at new Central Library, St. Peter's-square and St. Peter's-street, for the T.C. Mr. E. Vincent Harris, architect, 29, St. James's-square, S.W.1:—

Joinery—*William Moss & Sons, Ltd., Liverpool.
Fire-resisting glazing — *Luxfer, Ltd., Manchester.

Manchester.—For the erection of Crosslee Municipal School, Victoria-avenue, Blackley, for the E.C. Plans prepared in Education Department, Education Offices, Deansgate:—

*G. & W. Smith, Ltd., Manchester.

Manchester.—For (*a*) erection of 464 houses at the Royal Oak area, Wythenshawe; (*b*) electrical installation for 204 houses, Clayton estate; (*c*) 690 houses, Benchill (Section 2) and Brownley Green, for the Housing Committee. Mr. Leonard Heywood, F.R.I.B.A., Housing Director, Town Hall:—

(*a*) *Roofing*—*Manchester Slate Co., Ltd.
Plastering—*James Glynn, Oldham.
(*b*) *H. C. Taylor & Co., Manchester.
(*c*) *K. H. Clampett & Co., Ltd., Manchester.

Melksham.—16 non-parlour type houses, for the U.D.C.:—

*Bigwood & Co., Melksham—
Four pairs, type E.A.1 ..... £577 6 8
Four pairs, type E.A.3 ..... 579 6 0

Milnthorpe (Wakefield).—For alterations and additions at the Star Inn, for the Barnsley Brewery Co., Ltd. Mr. Raper, architect:—

*Squires & Sons, Ltd.

New Monkland.—For 32 houses for the Lanarkshire C.C., at Plains housing site. Mr. Peter C. Smith, County Housing Architect, Clydesdale-street, Hamilton:—

Excavation, brick and mason work—
*James Trew & Sons, Airdrie..... £4,376 18 1½
Joinery, carpentry and ironmongery works—
*Munro & James, Uddingston ... 3,033 8 8½
Plumber work—
*George Ferguson & Sons, Airdrie 1,229 0 0
Slater work—
*J. & G. Dunn, Ballieston, Glasgow 1,005 1 11½
Plaster work—
*Hugh McLean, Motherwell 549 18 4
Painter work—
John Grant, Coatbridge, Lanarkshire 247 2 6
Electric installation—
*Alexander Robertson, Charing Cross, Glasgow 159 7 8

Newcastle-on-Tyne.—For the conversion of the Grey-street Picture Hall, Newcastle, into business premises, for Messrs. Smart Bros., furnishers, London. Messrs. Marshall & Tweedy, FF.R.I.B.A., architects, 129, Pilgrim-street, Newcastle:—

*Joseph R. Rutherford & Sons, Minories Joinery Works, Jesmond, Newcastle-on-Tyne.

Newcastle-on-Tyne.—For the building of new showrooms with six shops at the corner of Eldon-street and Claremount-road, Newcastle. Messrs Marshall & Tweedy, FF.R.I.B.A., architects, Mervyn House, 129, Pilgrim-street, Newcastle:—

*Thomas Clements & Son, Newcastle.

Newcastle-on-Tyne.—For extensions to the premises of the Northern Club Federation Brewery, Ltd., Hanover-square, Newcastle. Messrs. W. Dixon & Son, architects, 1, Collingwood-street, Newcastle:—

*S. F. Davidson, 16, Ridley-villas, Newcastle.

Newcastle-on-Tyne.—For alterations to St. Mary's Roman Catholic School. Mr. Robert Burke, architect, 12, Grey-street, Newcastle:—

*Mackin, Felling-on-Tyne.

Newmarket.—For 54 houses, non-parlour, in nine blocks of six, on land in Exning-road, for the U.D.C. Mr. W. H. Eley, architect, Godolphin House:—

*M J. Gleeson, Ltd., 822, Chesterfield-road, Woodseate, Sheffield, 8 ..... £13,529

North Shields.—For 28 s. d. houses with garages attached on the Tynemouth Park estate:—

*G. Park, Ltd., Tynemouth-road, North Shields.

Northampton.—For alterations, electric wiring, etc., at Welford-road, Hospital, for the T.C.:—

*H. Lane £295 5

Northampton.—For the conversion of the race course grandstand, for the T.C.:—

‡Ralph West £5,863

Northwood.—Senior council school, Potter-street, Northwood, for the Middlesex C.C. Mr. W. T. Curtis, F.R.I.B.A., County Architect, 10, Great George-street, S.W.1:—

L. & W. Whitehead, Ltd., S.W.9 ... £19,641
Newby Bros., Ltd., Southgate 19,121
J. Laing & Son, Ltd., Mill Hill 19,107
Y. J. Lovell & Son, Gerrards Cross 18,938
J. Dorey & Co., Ltd., Brentford ... 18,896
W. Lacey, Hounslow 18,775
Fassnidge & Son, Ltd., Uxbridge..... 18,697
J. C. Rackham, Harrow Weald 18,640
W. J. Page & Son, Northwood 18,559
J. Woollard & Sons, Ltd., Acton 18,390
Harry Neal, Ltd., Northwood 18,046
‡W. S. Try, Uxbridge 18,031

Norwich.—For extensions to boot and shoe factory, for Messrs. P. Haldinstein & Sons, Ltd. Messrs. Buckingham & Berry, F.S.I., F.R.I.B.A., architects and surveyors, 43a, Prince of Wales-road, Norwich:—

May, Gurney & Co. £12,851 0
J. Youngs & Son, Ltd. 12,552 0
Greengrass & Sons 12,495 0
F. R. Hipperson & Son 12,379 14
*R. G. Carter, Ltd. 12,082 0

Nuneaton.—For the erection of 400 to 450 houses of six-roomed dwellings, with three bedrooms, with bathrooms, and in pairs:—

*R. H. Simmonds, Hinckley, Leicester.

Orpington.—Internal redecoration at the Council Offices, Crofton Pound Hill, Orpington, for the Bromley R.D.C. Mr. L. O. Wall, clerk:—

*W. G. Ellis & Son, 23, Station-road, St. Paul's Cray £36 12 9

Penrith.—24 non-parlour three-bedroom houses on the Castle Hill estate, for the U.D.C.:—

*John Laing & Son, Ltd. £6,828

Plymouth.—Additions to the Plymouth College, Ford Park Mr. Montague A. Bazeley, F.R.I.B.A., architect, 21, Princess-square:—

*A. N. Coles & Son, Ltd., Queen Ann Battery, Plymouth.

Preston.—41 houses at Frenchwood, for the T.C.:—

‡Pius A. Baines & Son, Preston £11,982 15 3

Prestonpans.—New school for the East Lothian E.C. Mr. F. W. Hardie, County Architect, County-buildings, Haddington:—

General contractors — *A. Robb & Son, 19, Willowbrae-road, Edinburgh.
Reinforced concrete and Truscon floors—*Trussed Concrete Steel Co., Ltd.

Renfrewshire.—On Mearns Park site, Newton Mearns, a scheme of five and six apartment dwelling-houses. Forty-six in all will be erected from prepared plans:—

*David Paul, Wedderlea-drive, Cardonald, Glasgow.

Rothbury.—For conveniences in the district, for the U.D.C. Mr. J. W. Corking, architect, 16, West-street, Gateshead-on-Tyne:—

Bricklayers—*Thomas Muckle & Sons, Rothbury.
Joiners—*Jeffreys & Gutherson, Thropton, Northumberland.
Slater and plasterer—*J. Gregory, Rothbury.
Plumber—*W. G. Mackay, Rothbury.
Painters and glaziers—*Clark Bros., Rothbury.

Rotherham.—For the erection of a meat market and alterations to the public abattoir, for the Markets Committee. Borough Surveyor, Vincent Turner, M.I.C.E., Town Hall:—

‡Building Department, Rotherham Corporation ..... (estimated) £10,500

Rotherham.—Six bungalows at Brampton Bierlow, 12 houses and six bungalows at Dalton, and six bungalows at Thrybergh, for the R.D.C.:—

J. Gleeson, Ltd., Sheffield £8,386 0
A. J. Pugh, Rawmarsh 8,169 10
W. Blair, Rotherham 8,018 6
‡H. Godley, Wickersley 8,105 10

Rothwell (W. Yorks.).—For various works on the housing estates of the Council, for the U.D.C.:—

Plumber's work—*J. Heaton.
Building maintenance, Rothwell Haigh estate—*A. Armitage & Sons, Ltd.
Building maintenance at Carleton, Lofthouse, and Thorpe estates—*J. Chapman & Sons.
Joiner's work on the Lofthouse estate — *N. Hall.
Painter's work at Rothwell Haigh estate—
90 *houses*—*J. Haigh & Sons.
100 *houses*—*J. Bedford.
101 *houses*—*J. Cripps & Son.

Rowley Regis.—146 houses on the Gorsty Hill housing estate, for the U.D.C.:—

*Housing, Ltd., Black Heath £40,727 15
(In lieu of tender.)

St. Helen's (Lancs).—For the erection of Junior Department to buildings corner of College and Duke-street, for Trustees of the Y.M.C.A. Messrs. Biram & Fletcher, FF.R.I.B.A., architects, 17, George-street:—

*T. Winstanley, Rainford, St. Helen's.

Scunthorpe and Frodingham.—For the erection of 50 houses on Crosby Housing Estate, for the U.D.C. Mr. Walter Farrar, engineer and surveyor, Council Offices, Market Hall:—

*Lumley & Bray, Winterton, near Doncaster £13,806 19

Seghill (Northumberland).—For pithead baths, for the Miners' Welfare Committee, London, at Seghill Colliery. Mr. J. H. Forshaw, architect, Miners' Welfare Committee, Dean Stanley-street, London, S.W.1:—

*J. Huntley & Sons, Sunderland.

Shenley.—For the erection of section "C" of the Middlesex Colony, Shenley, near St. Albans, for the Middlesex C.C. Mr. W. T. Curtis, F.R.I.B.A., County Architect, 10, Gt. George-street, Westminster, S.W.1:—

Foster & Dicksee, Ltd., London £29,893
A. Fairhead & Sons, Ltd., Enfield ... 29,000
Newby Bros., Ltd., Southgate 28,163
Henry Knight & Son, Tottenham 27,934
Y. J. Lovell & Son, Gerrards Cross ... 27,489
L. & W. Whitehead, Ltd., S.W.9 27,415
Wilson, Lovatt & Sons, Ltd., Wolverhampton 27,263
R. J. Rowley, Ltd., Tottenham 27,035
Albert Monk, Edmonton 26,813
C. Miskin & Sons, Ltd., St. Albans ... 26,655
W. S. Try, Uxbridge 26,648
‡Laing & Son, Ltd., Mill Hill 25,889

Smethwick.—For the erection of a factory in Dartmouth-road, for Dartmouth Auto Castings, Ltd. Mr. J. S. Blake, chief works engineer:—

Builders—*Geo. Webb & Son, Ltd., Birmingham.
Steelwork—*Wilfred Robbins, Ltd., Great Bridge, Tipton.

"CENTRIVAC" Positive Self-Priming
ROTARY PUMPS

For water, petrol, and all light liquids.

Electric motor or belt drive. Suction lifts up to 25 ft. Total heads up to 100 ft.
Quantities 250-1,000 g.p.h. Low power consumption. Minimum wear.

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Nine Elms Ironworks READING

Southampton.—Stainless steel shopfront at Above Bar. Mr. W. H. Saunders, architect:—
*Cheltenham Shopfitting Co., Ltd., Cheltenham.

Strabane.—22 working class houses in Melmount road, for the U.D.C.:—
*N. M'Dowell, Larne £6,675

Stratford-on-Avon.—Shop front premises in Lamb-street. Mr. L. L. Dumsalt, architect:—
*Cheltenham Shopfitting Co., Ltd., Cheltenham.

Stratford-on-Avon.—For the erection of houses as follows:—(a) 10 houses at Henley-in-Arden; (b) 2 houses Ullenhall, and 4 at Eatington; (c) 4 houses at Moreton Morrell; (d) 6 houses at Weston-on-Avon, for the R.D.C. G. E. Boshier, architect, High-street:—
(a) *G. Coppage, Henley-in-Arden £2,800
(b) *J. Aston & Sons, Coventry—
2 houses 660
4 houses 1,140
(c) *O. England, Wellesbourne 1,019
(d) *Harrison Bros., Redditch 1,700

Sunderland.—For a new café and house at Seaburn, for Mr. L. Guidi. Messrs. G. T. Brown & Son, architects, Fawcett-street, Sunderland:—
*Gordon Durham, Ltd., East Boldon, Durham.

Wakefield.—For alterations and additions at the laundry buildings in Southgate, for the Star Laundries, Ltd.:—
*A. G. Green.

Wallsend-on-Tyne.—For the erection of pithead baths at the Rising Sun Colliery. Mr. J. H. Forshaw, architect to the Miners' Welfare Committee, Dean Stanley-street, London, S.W.1:—
*Joseph Huntley & Sons, Marion-street, Sunderland.

Tutbury.—For houses, for the R.D.C. Mr. R. S. Litherland, L.R.I.B.A., architect, 10, High-street, Burton-on-Trent:—

Anslow, one pair—
Hodgee & Son, Burton-on-Trent £708
Holmes & Son, Burton-on-Trent 700
W. E. Ward, Alrewas, near Burton ... 690
*Harris Bros., Marehay, Derby 601

Branston, four pairs—
Woodward & Baskeyville, Tunstall, Stoke-on-Trent 2,961
H. Edwards, Ltd., Burton-on-Trent ... 2,720
Hodges & Son, Burton-on-Trent 2,672
W. E. Ward, Alrewas, near Burton ... 2,640
Holmes & Son, Burton-on-Trent 2,480
*Harris Bros., Marehay, Derby 2,302

Barton, one pair—
H. Edwards, Ltd., Burton-on-Trent ... 710
Hodges & Son 708
W. E. Ward, Alrewas, near Burton ... 670
Woodward & Baskeyville, Tunstall, Stoke-on-Trent 664
Holmes & Son Burton-on-Trent 650
*Harris Bros., Marehay, Derby 563

Hanbury, two pairs—
Hodges & Son 1,450
Holmes & Son 1,400
W. E. Ward 1,330
*Harris Bros. 1,178

Outwoods, one pair—
Hodges & Son, Burton-on-Trent 708
Holmes & Son, Burton-on-Trent 700
W. E. Ward, Alrewas 680
*Harris Bros., Derby 601

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W. E. Ward, Alrewas, near Burton ... 660
S. F. Clewes, Stretton, near Burton ... 660
Holmes & Son, Burton-on-Trent 650
*Harris Bros., Marehay, Derby 574

Walsall.—New stores in Park-street, for Messrs. Marks & Spencer, Ltd., 35, Chiswell-street, London, E.C.1:—
*Bovis, Ltd., London.

Wells.—Bungalow at Knapp Hill. Mr. W. L. Andrews, architect, Taunton:—
*Sage Bros., 14, Tor-street, Wells.

West Ham.—External painting of three schools for the E.C.:—

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Edwin Beasley, Ltd. ...	£259 15	£267 5	£199 0
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S. C. Grover	248 0	236 0	163 0
J. T. High & Co., 37, New Oxford-street, W.C.1	*196 18	229 15	187 9
H. C. Horswill, Ltd.	338 10	333 0	240 0
H. Lawrence & Sons, Coulsdon	253 10	310 0	171 10
J. T. Luton & Son, Ltd.	376 0	354 0	269 0
C. J. Manning, 64, Forest-lane, E.15	247 0	267 0	*147 0
G. H. Miller & Co.	319 0	298 0	—
Stoneley & Co., Talbot-road, E.7	—	*229 0	179 0
West Ham Corporation Works	327 0	332 0	230 0

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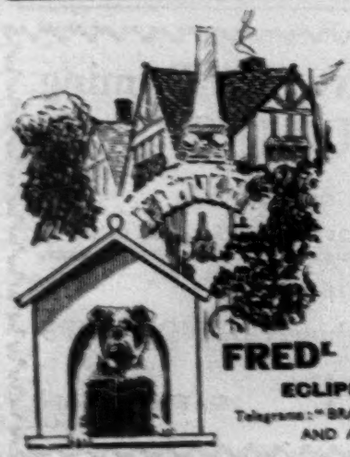
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